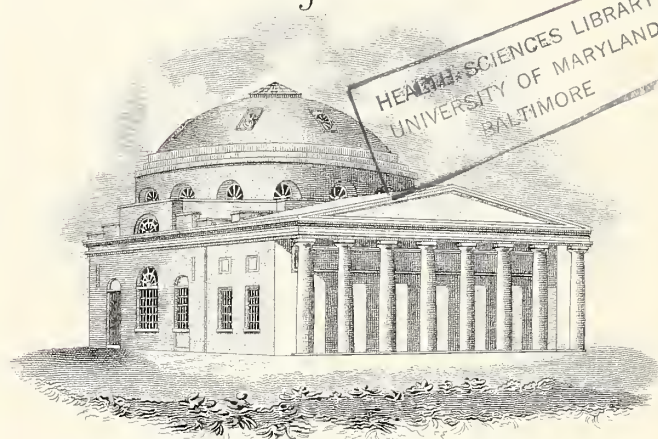


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The JOURNAL of the Iowa State Medical Society

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No. 1

QUINIDINE THERAPY

Howard B. Burchell, M.D., Rochester, Minn.

It has been about a quarter of a century since quinidine therapy for cardiac arrhythmia became widely accepted in America. If one reviews the American publications of the early twenties which discuss the results of quinidine administration, he finds that the clinical analyses of the benefits and dangers were accurate. Despite 25 years of further clinical study, the administration of quinidine is still associated with disputed issues, particularly in regard to its use in established auricular fibrillation.

Quinidine is useful in the cure or prevention of many instances of paroxysmal tachycardia and extrasystolic arrhythmia, definitely mandatory in the treatment of ventricular tachycardia of any duration, and of some lesser value in auricular flutter. It has its most frequent application in the restoration of normal rhythm in cases of auricular fibrillation where discrimination in selection of patients should be most important.

The questions which are asked by most investigators have been the same since 1920:

1. What type of case will most likely revert to normal rhythm?

2. What type of case will maintain normal rhythm?

3. Is the circulation of patients improved by restoring normal rhythm as compared with their status with auricular fibrillation under digitalis therapy?

4. What are the dangers of quinidine therapy?

(a) Sudden death.

(b) Peripheral embolism.

(c) Severe reactions.

5. Can one outline definite contraindications to quinidine therapy?

6. Are any new methods available to regulate quinidine dosage, favorably modify its effect or minimize its dangers?

1. *What type of case will most likely revert to normal rhythm?*

My own impression has been that hearts which are the most anatomically and functionally normal are the easiest to convert to normal rhythm—as in cases of:

(a) Persistent auricular fibrillation following relief of hyperthyroidism.

(b) Persistence of auricular fibrillation in an apparently normal heart previously subject to paroxysmal auricular fibrillation.

(c) Auricular fibrillation occurring as the only sign of probable arteriosclerotic heart disease.

Despite recent studies to the contrary, I have felt that cases of long-standing valvular disease associated with heart failure were more difficult to convert to normal rhythm, a view supported by the earlier studies in the literature. However, my personal experience is small as I have held the belief that in such cases quinidine is only occasionally indicated.

2. *What type of case will maintain normal rhythm?*

In general, the case of auricular fibrillation that will revert most easily to normal rhythm will be the one most likely to maintain it. However, exceptions are sufficiently frequent that one is not justified in giving up quinidine therapy of small dosage and of short duration on the assumption that if normal rhythm were restored it would not persist for a significant length of time. In the presence of extreme or aneurysmal dilation of the atria, however, or when heart failure is persistent, auricular fibrillation is apt to recur even after having been successfully abolished.

3. *Is the circulatory status improved by having normal rhythm restored, particularly when compared to the status with auricular fibrillation under digitalis medication?*

This question is not simple to answer, and one must avoid committing himself to a single possibility. From the standpoint of improvement, the clinical opinion, based on close study of the pa-

tient's exercise tolerance, is as important as more objective tests such as vital capacities or even cardiac outputs. Patients may fall into three categories:

(a) The largest group, those in whom the re-establishment of normal rhythm causes no definite increase in cardiac efficiency, as compared to the status when under adequate digitalis' therapy.

(b) Patients showing marked improvement in exercise tolerance and general well being after the restoration of normal rhythm. This second group may be subdivided into three types: (i) patients with arteriosclerotic heart disease in whom the rapid irregular ventricular rate with exercise seems to limit the cardiac work, even when under digitalis therapy, and in whom the restoration of normal rhythm is associated with decreased effort dyspnea and decreased effort angina; (ii) patients whose circulatory status is constantly jeopardized by pulmonary emboli; (iii) a small group of patients in whom, in the presence of valvular heart disease, heart failure was intractable to therapy until a phenomenal return to cardiac compensation took place following restoration of normal rhythm. (I have no example from my own practice but there are excellent descriptions in the literature.)

(c) Patients whose heart failure was initiated or aggravated by restoration of normal rhythm. (This small group of patients must not be confused with another reported small group wherein there was aggravation of heart failure with quinidine, but the sinus rhythm was not restored.) One of my cases, a young woman with mitral stenosis, who had adequate exercise tolerance and a normal venous pressure, was given quinidine because of auricular fibrillation of some months' duration. Concomitantly with the restoration of normal rhythm there was dyspnea, even at rest, and in spite of normal rhythm being progressively maintained, severe cardiac failure ensued with death in 10 days. Pulmonary emboli were suspected clinically, but on post mortem there was none present and nothing was found to account for the recent myocardiac insufficiency though severe mitral stenosis was present.

4. *What are the dangers of quinidine therapy?*

(a) Sudden death: I believe that anyone who treats patients with severe valvular disease with quinidine to restore normal rhythm will have sudden deaths, perhaps as high as one case in 30. I do not believe that these deaths can be ascribed simply to the fact that many patients with heart disease do die suddenly. The incidence of death in the "quinidine period"

is higher than the incidence of death in an untreated group in a similar short period. Deaths have most frequently occurred in the presence of cardiac enlargement and heart failure, and are not related to the amount of quinidine taken.

(b) Peripheral embolism: That the occurrence of peripheral embolism is associated with restoration of normal rhythm is, to my mind, an established fact. This does not mean that embolism might not have occurred anyway, but rather that, in a person who has had or is about to have embolism from an auricular thrombus, this complication is likely to be initiated by restoration of normal rhythm. As will be later mentioned, I believe that systemic or pulmonary emboli associated with atrial fibrillation are indications for quinidine therapy to restore normal rhythm. The various factors that play a role in the cessation of embolic accidents with the restoration of normal rhythm are not entirely clear. The usual explanation, that the synchronously contracting atria is a poorer place for thrombus formation, is not entirely satisfactory. The additional factor of increased circulation rates, or even the cessation of digitalis therapy and its thrombophilic propensities, may have importance.

(c) Severe reactions, such as circulatory collapse with or without marked tachycardia or asystole, occasionally occur.

5. *Can one outline contraindications to therapy?*

In general:

(a) Patients with valvular heart disease with long-standing atrial fibrillation who are well compensated on maintenance doses of digitalis.

(b) Patients with hyperthyroidism.

(c) Patients with greatly enlarged hearts and congestive heart failure, particularly when associated with slow ventricular rates.

(d) Patients with complete heart block. (I have not considered bundle branch block a necessary contraindication).

(e) Patients whose anginal pain has been relieved by the onset of auricular fibrillation.

The general indications for a quinidine trial to restore normal rhythm are:

(a) Auricular fibrillation in the absence of valvular disease and contraindications as listed above.

(b) A few cases of progressive heart failure associated with rapid ventricular rates.

(c) Occasional cases in which heart consciousness is a serious problem.

(d) Cases with the history of repeated emboli, if possible, with none of the contraindications listed above.

6. *Are there any new methods available pertaining to quinidine therapy?*

Method of dosage: intermittent or continuous, both of which are effective, have long been used and may be combined. During the period the quinidine dosage is being increased, I like to have it accomplished in the early part of the day so that if a reaction should occur, the house physician will be available to observe the patient and to carry out appropriate treatment.

Premedication with digitalis is definitely indicated with the history of failure, in my opinion. If there is any doubt about maintenance dosage, I usually stop the digitalis during the immediate quinidine administration so that there will be no chance of having minor toxic reactions of digitalis to confuse the clinical picture during the time of high quinidine dosage.

From reports in the literature, quinidine therapy based on blood levels of quinidine does not yet seem to hold much promise. Considering the marked variability in dosage required for different patients, perhaps such a method of dosage calculation could not be expected.

With the availability of anticoagulant therapy and the possibility of embolic accidents with restoration of regular rhythm with quinidine, it would seem proper treatment to make every effort toward prevention of recent thrombus in the atrium prior to quinidine therapy. While heparin might be used, I have been employing dicumarol for a week to 10 days before quinidine in all patients who have a history of embolic phenomenon or of any suggestion of cardiac decompensation.

Summary

The over-all advantages of restoring normal rhythm in patients with auricular fibrillation are more or less proportional to the degree of normalcy of the heart. In patients with valvular heart disease, phenomenal cessation of embolic accidents may result when their auricular fibrillation can be replaced by normal rhythm, but one should have a most conservative attitude toward patients with valvular heart disease and established auricular fibrillation, particularly if the condition is associated with any degree of heart failure. Whenever quinidine is given to patients with diseased hearts, there is a calculated risk which must be assumed. However, the assumption of such a risk is often warranted, and neither an attitude of complete disillusionment because of failures to convert patients nor of excessive timidity because of a rare accident should be developed. If discrimination is used in the selection of cases, it is felt that failures and accidents will be few. I should like to present additional statistical data to support the view of the value

of restoring normal rhythm in the prevention of emboli, but unfortunately the statistical analysis with study of control groups is not available at this time.

MUMPS ENCEPHALITIS

Peirce D. Knott, M.D., Sioux City

Mumps encephalitis, more correctly termed acute aseptic meningo-encephalitis, due to the mumps virus, may be found associated with or without salivary gland and testicular involvement.

Report of a Case

G.C., a white male, 3 years of age, was admitted to St. Vincent Hospital on Aug. 11, 1947 in a semistuporous condition. A history was given of a gastro-intestinal tract upset. Prior to his hospital admission, anorexia, vomiting and abdominal cramps had lasted three days and were followed for three additional days by extreme weakness and drowsiness with an inability to keep awake. The past history was essentially negative.

Physical Examination: Examination revealed the temperature to be 102 F. by rectum. The child was well developed although he was somewhat thin and the condition of his skin was dry. He was somnolent, barely opening his eyes when spoken to, and his expression was somewhat vacant. The pupils were round and equal, and reacted to light. The fundi were normal. Very slight nuchal rigidity and Brudzinski's sign were demonstrable, but Kernig's sign was negative. All reflexes, superficial and deep, were abolished although there was no evidence of paralysis noted in the various movements of the muscle groups.

Laboratory examinations were reported as follows: hemoglobin 90 per cent; red blood count 4,600,000; white blood count 14,200; polymorphonuclear 59 per cent; lymphocytes 41 per cent; no stippling in the blood smear; Wassermann reaction, negative. The urine was alkaline in reaction with no albumin, 1 plus sugar, occasional pus cells, and triple and amorphous phosphates. X-rays of the skull and lungs were negative. The spinal fluid was under no increase in pressure as recorded by a water manometer. The spinal fluid cell count was 4, all lymphocytes; spinal fluid sugar 78 mg.; protein 20 mg.; and chloride 715 mg.

Course in the Hospital: The patient was seen by a neurologist who confirmed the physical findings noted on admission. The fluid intake was

maintained at a 3,000 cc. level by gavage feeding and the administration of Ringer's solution subcutaneously. Penicillin and sulfadiazine medications were given to minimize the chance of invasion by secondary pyogenic organisms. The patient's temperature daily fluctuated from 99 F. to 101 F. His somnolent state persisted, and he opened his eyes only occasionally when his name was called, responded, "I am not hungry," when fluids were urged, and moved his extremities in response to repeated commands. On the fifth hospital day, a diffuse tender swelling of the left parotid was evidenced, bilateral sluggish achilles tendon jerks were elicited, and when his name was called he answered, "Yes," and focused his eyes on the examiner. On the seventh day, the patient stood up in his crib and said a few words; biceps, triceps and knee jerks reappeared faintly; and he started taking liquids by mouth. After this, his psyche cleared rapidly, his memory was good and his speech was monotonous and somewhat nasal in quality. Voluntary control of bowels and bladder returned, and his reflexes, although sluggish, were all present and equal. The parotid swelling gradually subsided, and he was dismissed to his home on the tenth hospital day. Subsequent examination has revealed no physical or psychic residual.

Comment: Although unconfirmed by complement and skin sensitivity studies, as yet commercially unavailable, this case exemplifies the clinical syndrome of acute aseptic meningo-encephalitis with parotid gland involvement due to mumps virus. Johnson and Goodpasture first demonstrated that mumps was caused by a virus which could be transmitted by injection from the filtered salivary secretions of infected individuals into the Stensen's ducts of susceptible rhesus monkeys. Enders and Kane, of the Department of Bacteriology and Immunology at Harvard Medical School, confirmed these findings and further showed that the virus reaches its greatest concentration in the parotid gland five to seven days after injection, which is approximately three days in advance of the usual parotid enlargement in mumps.

They have also shown that if the parotid gland is excised from the monkey at this stage of greatest viral concentration it can be used as an antigen for a specific complement fixation test to diagnose the presence of an antibody in the serum of human beings infected with or convalescing from mumps. In addition, it was shown that when the virus was inactivated by heat it could be employed as a skin test to determine human susceptibility to mumps. The com-

plement fixing antibody and the hypersensitive dermal state can result from clinically overt or inapparent infection with the virus of mumps. Brigadier General Russell suggested the desirability of such determinations for mumps immunity because of the number of man-hours lost during the war in the army camps by epidemic parotitis. This stimulated further research by Kane and Enders to evaluate 51 collected cases of the clinical syndrome known as acute aseptic meningitis, infectious encephalitis, or acute aseptic meningo-encephalitis. This condition is known to be clinically produced by the viral invasion of the mumps, lymphocytic choriomeningitis, western equine encephalitis, Japanese encephalitis, St. Louis encephalitis, Russian tick-borne encephalitis, loupingill, and poliomyelitis organisms. Because of the single strain specificity of the mumps virus and its antibody response in the serums of infected individuals, the complement fixation test became a valuable tool in differentiating those cases of aseptic meningo-encephalitis which were due to mumps virus. Out of 51 cases studied, 34 revealed significantly high or rising titers of the complement fixation antibody disclosing a true mumps virus etiology, although only 17 of them presented salivary gland or testicular involvement which would clinically have been diagnosed mumps. Four of these cases showed salivary gland involvement coming from two to five days after the encephalitis, a reverse sequence similar to the case reported in the beginning of this discussion. The remaining 18 cases gave no serologic or clinical evidence of recent infection with the mumps virus. Further analysis of the aseptic meningo-encephalitis series suggested that the cases due to the mumps virus were more likely to occur during the first seven months of the year, were more abrupt in onset, presented more abdominal pain, had a lymphocytic percentage of 45 or higher in the spinal fluid, but were less apt to have a positive Kernig's sign and showed less of an increase in the spinal fluid protein than the cases of meningo-encephalitis due to organisms other than the mumps virus.

Doctors

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DIAGNOSIS AND TREATMENT OF BLEPHAROCONJUNCTIVITIS

James H. Allen, M.D., Iowa City*

Recognition of blepharoconjunctivitis is simple, but determination of the cause and treatment of this condition frequently is difficult. Perhaps this is one of several reasons why it is the most common external disease of the eyes.

Blepharoconjunctivitis may be divided into two groups of cases: those producing generalized inflammation of the lids and those producing localized lesions. Blepharitis marginalis and angular conjunctivitis are typical of the latter group, whereas allergic and contact blepharoconjunctivitis are typical of the generalized inflammatory reactions of the lids. These groups are composed of a large number of etiologic entities, most of which may produce either type of lid lesion. Therefore, this discussion will be confined to the most common forms and, incidentally, the most difficult to treat. These are staphylococcic blepharoconjunctivitis, seborrheic blepharitis, mixed seborrheic and staphylococcic blepharitis, allergic or contact blepharoconjunctivitis and angular conjunctivitis.

Seborrheic Blepharitis: Seborrheic blepharitis is a bilateral lesion characterized by dull, dirty, greasy, loosely adherent scales on the slightly reddened lid margins. In some cases conjunctival irritation occurs, especially during the use of near vision under artificial illumination. This type of blepharitis is always associated with or secondary to a seborrheic dermatitis of the scalp, brows or face, the course of which parallels the remissions and exacerbations of the primary lesions. The causative agent probably is a *Candida Pityrosporum ovale*. Lid margin scrapings show many of the budding yeast cells.

Staphylococcic Blepharitis: Blepharitis marginalis of staphylococcic origin may be squamous but usually is ulcerative in type with the ulcers and lid margins covered by hard, tenacious scales. The lesion occasionally may be unilateral and frequently shows considerable variation in the inflammatory intensity even on a single lid. The lower lids frequently show a greater amount of involvement. In addition to ulcerations of the lid margin, hordeola and chalazions are frequent. Temporary or permanent loss of lashes is common. This type of blepharitis is characterized by a long course of remissions and exacerbations of signs and symptoms. During the severe exacerbations, an eczematoid dermatitis of the skin

of the lids, extreme conjunctivitis and keratitis may develop. During the remissions, there are no symptoms; however, with exacerbations, burning, smarting and foreign body sensations develop. A watery or a slight to moderate purulent discharge may appear. With a more acute exacerbation, superficial punctate epithelial keratitis or marginal corneal ulceration with accompanying photophobia may develop. This type of blepharitis frequently is accompanied by staphylococcic skin lesions of the face such as sycosis barbae, impetigo, acne vulgaris, otitis externa and infectious eczematoid dermatitis.

Mixed Seborrheic and Staphylococcic Blepharitis: Seborrheic blepharitis is frequently complicated by the superimposition of staphylococcic infection. It is quite possible that many staphylococcic infections of the lid margins may become established upon a pre-existing seborrheic blepharitis. However, once established, the lesion takes on the characteristics of staphylococcic blepharitis, and in many cases the mixed nature of the lesion does not become manifest until the staphylococcic element of the infection is either eliminated or greatly reduced. Then the seborrheic aspects become manifest and persist until proper treatment is instituted.

Morax-Axenfeld Blepharitis: This type of blepharitis is quite rare in Iowa. It is characterized by a mild blepharitis associated with maceration or excoriation of the lids at the canthi. Usually the outer canthi are involved, but the inner or both the outer and inner canthi may exhibit the characteristic angular excoriations. The lid margins are never ulcerated, and there is no involvement of the glands or hair follicles of the lids. However, there invariably is an accompanying conjunctivitis, and at times an associated epithelial keratitis or superficial marginal corneal ulceration.

Allergic Blepharitis: Allergic blepharitis may vary from slight itching to vesiculation and excoriation of the skin of the lids. Characteristically, the skin of the lids is thin and wrinkled, having the appearance of old parchment, with a fine scaly surface. This appearance extends outward, fading indistinctly on the cheek, temple and brow. In a more acute lesion, weeping eczematoid changes occur. This type of lesion is seldom accompanied by involvement of the lid margins, lash follicles or glands of the lids, but is always accompanied by a greater or lesser degree of hyperemia of the conjunctiva associated with excessive lacrimation. In severe cases, a marginal corneal infiltration without ulceration may develop. The characteristic symptoms are

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itching and weeping, with the addition of photophobia in cases with keratitis.

Differential Diagnosis

Perhaps a consideration of the differences of the various lesions by individual sign and symptom might lend some clarity to the differential diagnosis.

Scales are not present on the lid margins in contact blepharitis and Morax-Axenfeld blepharitis; however, they are characteristic in pyogenic bacterial inflammations of the lid margins and in seborrheic blepharitis. In the latter case the scales are soft, dirty, greasy and easily removed, whereas in staphylococcic blepharitis and other pyogenic types of inflammation the scales are hard and adherent to the lid margins.

Ulcers of the lid margin occur most characteristically in staphylococcic blepharitis and less commonly or not at all in other types.

Hordeola and chalazions are common complications of staphylococcic blepharitis. Occasionally they are due to other pyogenic bacteria. They are not found in pure seborrheic, contact or Morax-Axenfeld blepharitis.

Excoriation of the skin, only at the canthi, is most characteristic of Morax-Axenfeld blepharitis but also may occur with staphylococcic lesions. It does not occur in seborrheic blepharitis. In contact blepharitis and the more severe cases of staphylococcic blepharitis, excoriations of the lids are more generalized.

Conjunctivitis is usually not found with pure seborrheic blepharitis, but when it does occur it is mild and catarrhal in character.

Catarrhal conjunctivitis is always associated with Morax-Axenfeld blepharitis, and it may vary from mild to severe. Similarly, mild to severe conjunctival injection with lacrimation may accompany contact blepharitis. However, the conjunctivitis associated with staphylococcic blepharitis may vary from a mild purulent variety to a severe catarrhal form.

The cornea seldom is affected in seborrheic blepharitis, and then only as a mild superficial punctate epithelial keratitis. A fine diffuse type of superficial punctate epithelial keratitis is one of the two characteristic complications of severe staphylococcic blepharitis; the other is marginal corneal ulceration. A larger type of epithelial keratitis or marginal corneal ulceration is found with Morax-Axenfeld blepharitis. Marginal infiltration into the stroma of the cornea without ulceration is a characteristic complication of contact blepharitis.

With the exception of the asymptomatic cases of seborrheic blepharitis, all types of blepharitis are characterized by an increase of symptoms

during use of the eyes for near vision, especially under artificial illumination. Symptoms common to all types are burning, scratching, smarting and watering of the eyes with the addition of photophobia when corneal complications develop and itching in contact blepharitis.

Scrapings made from the lid margins stained by Gram's method show many budding yeast cells in seborrheic blepharitis, gram-positive spherical cocci in staphylococcic blepharitis, both yeast and cocci in mixed lesions, gram-negative diplobacilli in Morax-Axenfeld blepharitis, and a few diphtheroids with occasional cocci in allergic blepharitis.

Cultures from these cases made in routine manner on blood agar or Löffler's slants show no growth in seborrheic and contact blepharitis. However, they do show hemolytic colonies of staphylococci in staphylococcic and mixed cases, and also typical colonies of *H. duplex* (Morax-Axenfeld diplobacillus) in Morax-Axenfeld blepharitis.

Treatment

Seborrheic Blepharitis: Cleansing of the eyelids followed by application of 3 per cent ammoniated mercury ointment three times a day results in rapid improvement and may produce a temporary cure of seborrheic blepharitis. However, since the lid margin lesion is secondary to seborrheic dermatitis of the scalp or face, it will persist or return unless the source is cured or controlled. Therefore, vigorous measures for the control of dandruff should be instituted and maintained.

Staphylococcus Blepharitis: The treatment of staphylococcic blepharitis and blepharoconjunctivitis is a difficult and prolonged procedure in many cases. This is due, probably, to the associated involvement of the glands of the lid margins which permits the infection to persist deep in the glands even though the surface infection may be controlled temporarily.

The occasional case of acute blepharitis or blepharoconjunctivitis of staphylococcic origin without involvement of the glands may be controlled completely by vigorous treatment with any of the usual conjunctival antiseptics, but once the glands of the lid margins are involved the disease becomes chronic, and repeated hordeola, meibomian abscesses and chalazions complicate the problem of treatment.

In all cases the lid margins should be cleansed thoroughly. For the more difficult cases with tightly adherent scales, a 1/5000 aqueous solution of zephiran chloride is valuable because of its detergent action. The scales should be moistened

with this solution and the patient instructed to soak the lids by the application of wet compresses for five to 10 minutes. Cleansing of the margins with a cotton applicator moistened with zephiran chloride solution then usually is easy.

After cleansing, the lids should be expressed or massaged in order to expel the contents of the glands. The material expressed should be removed from the lid margin with a cotton applicator moistened (not wet) with 2 per cent aqueous solution of silver nitrate, care being exerted to avoid touching the cornea or conjunctiva with the applicator. This should be followed by the instillation of one drop of 1/1000 aqueous solution of suprarenin onto the conjunctiva. In severe cases this procedure may be repeated daily for several days, then at progressively less frequent intervals until the inflammation subsides.

During the acute episodes and with chronic involvement of the glands, the patient should be instructed to use hot, wet compresses on the lids for 15 to 20 minutes, three or four times a day.

In addition, the patient should be instructed in the use of local antiseptic drops or ointment. Penicillin ointment, 2,000 units per gram, 5 per cent sulfathiazole ointment or 10 per cent sulfacetimide ointment should be used four to six times a day, or one drop of 30 per cent aqueous solution of sulfacetimide should be instilled onto the conjunctiva every hour while the patient is awake. These medications are sometimes more effective when alternated, but one of them should be used in decreasing frequency every day for at least two weeks after the lids and conjunctiva apparently have returned to normal.

Occasionally such methods of treatment are not adequate; therefore, supplementary immunization procedures are required. If the lesion is complicated by keratitis or corneal ulceration, passive immunization should be accomplished with daily injections of 10,000 units of staphylococcus antitoxin until the corneal lesion is healed. Normally four injections are adequate. This should be followed by active immunization with a combination of staphylococcus vaccine and toxoid. In the absence of corneal lesions, passive immunization with antitoxin is unnecessary, and active immunization may be instituted at any time it is deemed advisable. This may be accomplished by the following schedule of injections:

0.1 cc. Vaccine and toxoid	} at 4 day intervals
0.2 cc. " " "	
0.3 cc. " " "	
0.4 cc. " " "	
0.5 cc. " " "	
0.6 cc. " " "	
0.7 cc. " " "	
0.8 cc. " " "	
0.9 cc. " " "	
1.0 cc. " " "	
1.0 cc. Vaccine and toxoid—once a week for five weeks.	

Local treatments should be continued during and following immunization procedures as indicated by the clinical manifestations.

Mixed Seborrhic and Staphylococcic Lesions: Mixed seborrhic and staphylococcic blepharitis and blepharoconjunctivitis should be treated as if the lesions were staphylococcic, but simultaneously foci of seborrhic dermatitis elsewhere on the face and scalp should be eliminated. Under this regime the seborrhic element may disappear with the staphylococcic, but should it persist further therapy should be directed along the lines outlined above for pure seborrhic blepharitis.

Morax-Axenfeld Blepharitis: This type of blepharitis and blepharoconjunctivitis responds well to the application of 5 per cent sulfathiazole ointment or 10 per cent sulfacetimide ointment four times a day. It may, however, be necessary to maintain treatment for three to four weeks in order to prevent recurrences.

Allergic Blepharitis: The primary consideration in the treatment of allergic or contact blepharoconjunctivitis is the determination of the offending agent. In the majority of cases, particularly in women, cosmetics (nail polish, powder, cream, perfume, mascara, etc.) are the chief source of difficulty. The next most common source is drugs (butyn, atropine, pontocaine, hydrochloride, etc.). In fewer instances, foods, plants, pollen, animal epidermals and irritating dusts are the source. The offending agent may be determined by history of contact, by the process of elimination or by patch testing. Once the agent has been ascertained, every effort should be made to prevent contact between it and the patient, or the patient should be desensitized. In severe cases and in those in which the offending agent has not been determined, the antihistamine drugs may be of benefit. Benadryl or pyribenzamine may be given in 25 mg. doses four to six times a day for the adult. For the child, the total daily dose may be calculated on the basis of 2 mg. per pound of body weight, divided into four equal parts for administration throughout the day. The total daily dose should not exceed 150 or 200 mg.

Discussion

James E. Reeder, Jr., M.D., Sioux City: Dr. Allen has concisely and ably presented to us a valuable classification of the more common types of blepharoconjunctivitis. It behooves us to examine our patients more closely, both as to history and examination. The symptomatology is especially important. There is one procedure in diagnosis which should be emphasized—a smear and sometimes a culture of

either the lid margin or the conjunctiva, which is an aid in establishing a diagnosis.

There is one point where an exception has to be raised. Morax-Axenfeld's conjunctivitis is seen more commonly in Iowa than is supposed—at least in Sioux City and the surrounding territory. The usual routine is to take a smear of all those in whom it is suspected.

Another point concerns the treatment of staphylococcal blepharitis. It is stated that stock vaccine is used. I have found it expedient to use an autogenetic vaccine, which is done by using either scrapings of the lid margins or a culture from a chalazion or a hordeolum.

This condition is too often neglected by the average ophthalmologist because of the time involved in some of the procedures for both diagnosis and treatment for all of us are prone to use short cuts to the detriment of the patient and ourselves.

THE USE OF RADIUM IN THE TREATMENT OF NASOPHARYNGEAL LYMPHOID TISSUE

William H. Tyler, M.D., Cedar Rapids

In 1905 Heineke¹ reported that next to the sex cells lymphoid tissue was the most susceptible to irradiation of any tissue in the human body. Between the years 1905 and 1939 little use was made of this fact in regard to the treatment of nasopharynx lymphoid tissue. In 1939 Crowe and Baylor,² after 10 years of observation of the use of radon in the nasopharynx, made their results known to the medical profession. This report concerned chiefly the use of radon for the removal of the lymphoid tissue about the eustachian orifices which was causing catarrhal otitis media and deafness. This was an important advance in the prophylaxis and treatment of deafness, but it was also important from the standpoint that it developed a renewed interest in nasopharyngeal lymphoid tissue as the etiologic factor in other conditions and offered a simple method of eradication of the offending tissue. Prior to 1939, surgery was the usual treatment offered one who had recurrence of adenoid tissue. This was not always successful in view of the fact that lymphoid tissue is an integral part of the mucous membrane of the nasopharynx and if much infection was present hyperplasia would again soon be evident. Also, little could be done surgically about the eustachian orifice for fear of a scar tissue formation with subsequent constriction of the eustachian tube.

The historical background of the development of the use of radium in the treatment of naso-

pharyngeal lymphoid tissue is extremely interesting for it represents a vast amount of research and patient observation. For many years a program of examining and obtaining audiograms on patients who were not expected to live has been carried on at the Johns Hopkins University School of Medicine. At autopsy, the temporal bones of these patients were sectioned, and an attempt was made to correlate the clinical findings with the pathologic findings. On review of over 2,000 cases they found many patients who exhibited only a loss for high tones, whereas the pathologic sections revealed only a catarrhal otitis media, the organ of Corti being entirely normal.³ These findings made them question the old concept that interference with the conduction apparatus results in depression of the low frequencies while disease of the cochlea or auditory nerve results in impairment of the high frequencies. They then examined 1,300 school children in the city of Baltimore and found that 40 per cent of these had impairment of the frequencies above 2,048 and that 3 per cent had impaired hearing for all tones. Examination of these children revealed that the vast majority had adenoid tissue about the eustachian orifices along with opaque, retracted tympanic membranes. Treatment of this tubal adenoid was carried out with radon; the results were good in regard to the regression of tissue and in the improvement of hearing. After three treatments, 89.5 per cent presented normal tubal orifices; of the children who had impairment of all frequencies, the vast majority received definite improvement; of those who exhibited loss for high frequencies, one-third improved.⁴

Since Crowe and Baylor's first report, other investigators (Fisher,⁵ Boies,⁶ Proctor,⁷ Fowler, Smith,⁸ Neuhauser and Ferguson,⁹ Fricke and Brown,¹⁰ Harris and Montgomery¹¹) have reported on the use of irradiation in the treatment of nasopharyngeal lymphoid tissue, not only in cases of catarrhal otitis media but also in such conditions as sinusitis, postnasal discharge, asthmatic bronchitis and recurrent rhinitis. In selected cases the results have been good. Irradiation is no cure-all, and the percentage of good results will vary in direct proportion to the thoroughness of the clinical examination. Also, irradiation is an adjunct to surgery, not a substitute. If the patient has a large mass of centrally located adenoid tissue, the treatment of choice is surgery, followed by irradiation if necessary.

Technic of Use of the Radium Applicator

As noted previously, Crowe's original work was carried out with the use of radon. How-

ever, during the war the use of radon was impractical, and therefore a radium applicator was developed. This applicator is 17 cm. long with a 2 mm. Monel metal chamber at one end containing 50 mg. of radium sulfate. At first it was used for six and one-half minutes on each side of the nasopharynx, but the results with this time interval seemed to be only temporary; hence, the time was increased to eight minutes. Still the results were not as permanent as with radon. Recently the beta ray output of 50 millicuries of radon and 50 mg. of radium sulfate in a 3 mm. Monel chamber were compared, and it was found that the beta ray output of the radon was two and one-half times that of the radium sulfate applicator. At the present time, treatments of 12 minutes to each side of the nasopharynx are being given at two-week intervals. After four treatments, a period of four to six months should elapse before any further treatments are administered.¹²

The administration of the radium is simple and can generally be carried out with ease on a child of five years or over. I usually spray the nares with a 1 per cent ephedrine solution followed by a 2 per cent cocaine solution. After thorough shrinkage has been accomplished, I place a long pledget of cotton saturated with 5 per cent cocaine on the floor of each naris and leave for five minutes following which I insert the applicator. The anesthetic or the technic used matters little. The main aim is to place the applicator in the nasopharynx without exciting the child so that he will lie quietly for 24 minutes. It is important that the side of the Monel chamber which contains the radium lies adjacent to the tissue to be treated for the rays are given off from the sides of the chamber, not from the end. The main contraindication to the use of radium is an acute upper respiratory infection.

Radium in the Treatment of Deafness

It has been estimated that in the next generation the incidence of deafness in the adult population would be reduced 50 per cent if children now of school age had the benefit of audiogram and nasoscopic examinations every six months. It is only in this way that the numerous cases of subclinical deafness—that is, impairment of the frequencies above 2,048—can be detected and proper treatment instituted before irreversible changes have taken place. At the present time such a program has been established in only a few localities; consequently, most of us will have to relegate our treatment to those children in whom parents or teachers have observed some practical loss of hearing. The results obtained

in these children are excellent if the time and patience is taken to evaluate them. It is discouraging to see children with a 30-40 decibel hearing loss who have been treated by physi-

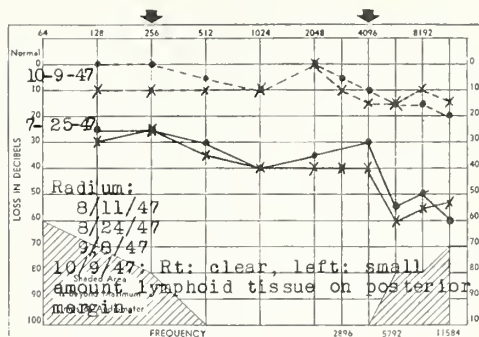


CHART 1

Audiogram of patient K. M., aged 6. Parents had been cognizant of some hearing loss in the child since age 3. Adenotonsillectomy at 2 years of age because of nasal discharge and snoring. In past 2 years has had repeated earaches but no discharge. Px: both ear drums intact, but lusterless and 2+ retracted. Eustachian orifices not visualized with the nasoscope. Radium given for 12 minutes bilaterally on Aug. 11, 1947, Aug. 24, 1947, and Sept. 8, 1947. On Oct. 9, 1947, right eustachian orifice clear; small amount of lymphoid tissue on posterior margin of left eustachian orifice. Hearing normal for all practical purposes. Parents noticed considerable improvement in hearing shortly following second treatment.

cians, even otologists, who do nothing effective for them. Most physicians will readily recommend an adenotonsillectomy in children with middle ear disorders, but it has been my experience that too many assume an attitude of complacency if this procedure has already been performed.

For the proper selection of candidates for

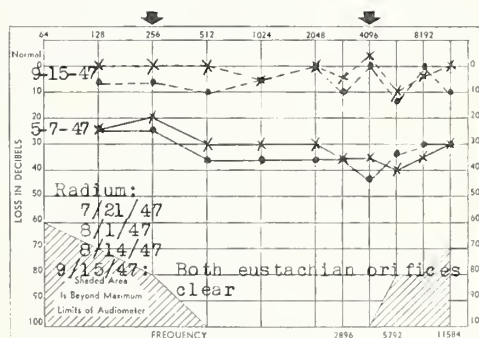


CHART 2

Audiogram of patient M. B., aged 12. Parents and teachers had been aware of child having some loss of hearing for past 2 years which was becoming progressively worse. History of purulent nasal discharge for past 6 months. Px: both nares filled with mucopus. Drums intact, but lusterless and 2+ retracted. Large mass of centrally placed adenoid tissue, eustachian orifices not visualized. Sinus x-rays revealed bilateral maxillary sinusitis with fluid levels. Surgical adenoidectomy and bilateral intranasal anastomies performed on June 18, 1947 at which time both eustachian tubes were inflated. For about 2 days following surgery, patient's hearing was considerably improved but then reverted to old status. Nasoscopic examination on July 21, 1947: eustachian orifices identified but were mere slits due to heaping up of lymphoid tissue about their margins. Still considerable amount of lymphoid tissue in the fossae of Rosenmüller. Radium for 9 minutes bilaterally on July 21, 1947, Aug. 1, 1947, and Aug. 14, 1947. Nasoscopic examination on Sept. 15, 1947 revealed eustachian orifices to be clear. Hearing normal for all practical purposes. Marked improvement in hearing did not occur until about 2 weeks following third treatment.

irradiation among hard of hearing children, a complete history and audiogram should be taken, and a thorough ear, nose and throat examination given which includes inspection of the nasopharynx with the nasoscope. In this manner the ideal cases are selected and the percentage of good results will be high. It was reported by various investigators (Smith,⁸ Boies,⁶ Fisher,⁵ Hawley,¹⁸ Rentschler and Settle,¹⁷ Harris and Montgomery,¹¹ Fricke and Brown,¹⁰), in a review of 287 patients who had loss of hearing severe enough to be definitely handicapping, that a total of 257 or 89 per cent received definite benefit from the use of radon, radium or x-ray. However, if the physician does not have the time or equipment to perform such an extensive examination, the history alone in many cases is sufficient to war-

reveal any hearing impairment. It is not advised that these children be treated with irradiation, but they should be observed at six month intervals and if any hearing loss develops treatment should then be carried out.

May I reiterate that irradiation is not a substitute for surgery. If these children with catarrhal otitis media have a large mass of adenoid tissue, whether original or secondary, surgical removal should be carried out followed by irradiation.

Radium in the Treatment of Postnasal Discharge

Quite aptly Proetz has labeled this condition "the current American nightmare."¹³ The causes of postnasal discharge are numerous, and the majority by no means has its etiology in hyperplastic nasopharyngeal lymphoid tissue. Fisher,⁵ Smith⁸ and Ashbury¹⁴ have all reported good results in selected cases with the use of irradiation. Certainly if the discharge is due to an allergic condition or to irritation caused by fumes, tobacco, etc., irradiation will be of no benefit.

There has been considerable discussion in the literature as to the advantage of radium over x-ray irradiation in the treatment of lymphoid tissue in the nasopharynx. An issue has been made of the fact that with the use of x-ray it is necessary to "shoot" through normal tissue to accomplish the desired end. I believe that this is of little consequence if the x-ray is being delivered by a competent radiologist. As far as the end results are concerned, I don't believe there is any argument. I prefer to use the radium applicator in the majority of cases because it is simpler and it permits me to follow my patients more closely. However, in cases of postnasal discharge, in which the patient has hyperplastic lymphoid tissue in the nasopharynx and large lateral pharyngeal bands extending into the oropharynx, I feel that x-ray is of more benefit—or possibly a combination of radium and x-ray, using radium for the hyperplastic tissue in the nasopharynx and x-ray for the oropharynx.

Radium in the Treatment of Recurrent Rhinitis and Sinusitis

These conditions are considered together because in the cases which are usually candidates for irradiation the child is subject to recurrent upper respiratory infections, complicated for weeks or months by a suppurative ethmoiditis. The mother usually relates that the child has five or six colds each winter but is never completely over one when the next one develops, or else

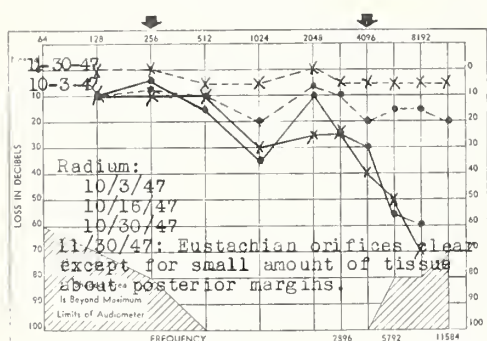


CHART 3

Audiogram of patient D. T., aged 9. An example of high frequency hearing loss due to tubal obstruction. History of recurrent earaches but no drainage, during which patient would have considerable hearing loss. Adenotonsillectomy at age 7 because of recurrent sore throats and earaches. P: eardrums essentially normal. Eustachian orifices not visualized with nasoscope, small amount of mid-line adenoid tissue present. Radium for 12 minutes bilaterally on Oct. 3, 1947, Oct. 16, 1947, and Oct. 30, 1947. Nasoscopic examinations on Nov. 30, 1947: eustachian orifices readily visualized but still small amount of tissue about posterior margins.

rant irradiation of the nasopharynx. I'm sure, if nothing else were done, a fair percentage of gratifying results would be obtained.

In cases of otosclerosis or nerve deafness, no improvement can be expected. However, it is the feeling that if these children have lymphoid tissue obstructing the eustachian orifice irradiation is indicated to prevent the possibility of a superimposed catarrhal otitis media. Also, in children who have a loss for high frequencies only, irradiation is indicated in the presence of tubal adenoid tissue because having no accurate device for measuring bone conduction above 2,048 frequencies a definite diagnosis may rely on a therapeutic trial of irradiation. If routine nasoscopic examinations are performed on children, in many of them it will be found that the eustachian orifice will apparently be occluded by lymphoid tissue, but there will be no history of recurrent otitis media nor will the audiogram

that the child gets a cold in the fall which lasts until spring. Many times a history of a chronic cough is also elicited in these patients. With such a history one must rule out the possibility of an allergy, but if the condition is one of pure infection, an adenotonsillectomy will usually result in a dramatic improvement. Dean and Armstrong some years ago reported on 1,100 children with suppurative sinusitis of which 80 per cent were cured by the removal of the tonsils and adenoids. However, in children who have had surgery, we still see a good number with the above syndrome, and examination of the nasopharynx will usually reveal a moderate amount of diffuse hyperplastic lymphoid tissue. If the condition has existed for any length of time, the oropharynx will be secondarily involved and will exhibit a granular pharyngitis. Irradiation of the tissue in the nasopharynx will result in the reduction of the number of colds along with the disappearance of the secondary sinusitis. Fricke and Brown,¹⁰ Ashbury,¹⁴ and Crowe and Walz¹⁵ have all reported good results in these cases.

Radium in the Treatment of Asthmatic Bronchitis

As pointed out previously, the use of radon or radium for the removal of nasopharyngeal lymphoid tissue was developed chiefly for use in cases of catarrhal otitis media. Coincidentally, Crowe⁴ and his associates found that a high percentage of children with asthmatic bronchitis were considerably improved or entirely relieved of their attacks following irradiation. For the most part, the patients who received the most dramatic improvement were the ones with infective asthma. However, in the allergic child who is not responding well to desensitization therapy, the eradication of infected lymphoid nodules in the nasopharynx sometimes results in complete relief of the patient's distressing symptoms.¹⁶

Discussion

James A. Downing, M.D., Des Moines: Dr. Tyler's excellent and complete paper deals with the type of hearing loss which should be the most gratifying to successfully treat than any of the types of ear disability with which we are concerned.

If any gain in the prevention of hearing loss in the population and the elimination of hearing defects in later life is to be attained, this particular work requires the utmost care and patience by the aurist as the treatment of hearing losses of this type is neither simple nor quick.

The parents of these children should be told the length of time it may require to establish a stable eustachian tube and middle ear, and good average hearing. This usually requires a period of several years during which they must be kept under observa-

tion. As growth and development occur and the angulation between the floor of the nose and nasopharynx becomes more acute, middle ears are not as susceptible to infection.

Children that are referred for examinations by nurses and schools should have accurate testing. A careful history of their hearing disability should be obtained because, particularly in younger children having an adenoid condition about the tubes, hearing is apt to vary greatly from month to month. We know audiometer testing in school is not diagnostic and the only thing it will demonstrate is that there is some hearing defect. The type of deafness and whether it is permanent or transitory must be determined by individual examination of the patient.

The great majority of these hearing disabilities can be relieved by surgery, tonsillectomy and/or adenoidectomy. Probably 75 per cent of them will require no further care other than an occasional observation. However, in dealing with these cases, the parents should be well informed in advance that if surgery is not sufficient and the hearing defect reoccurs after the removal of the adenoids then irradiation should be employed. The child should also be watched over a period of time to insure that eventually he will have good average hearing.

This condition is not entirely confined to early childhood. It is occasionally seen in adults in about the same proportion in which we see persistent adenoiditis in individuals; when it does occur, the amount of irradiation necessary to obtain results is usually greater than in early childhood. Each child who has a history of recurrent ear infections and loss of hearing, even though he has had an adenotonsillectomy, should have a careful examination of his nasopharynx and his throat since adenoid tissue is very prone to recur, and it is often necessary to remove adenoids two or three times in the same individual.

In my experience the high tone loss which occurs in these individuals is practically permanent. Little improvement in high tone loss can be expected even with surgery and irradiation, although a certain amount of regeneration may occur if therapy is not delayed. The most feasible explanation, in my own mind, of the high tone loss occurring in catarrhal otitis media is that there is osmosis through the round window which damages the high tone area which is in close proximity to it. Whether this is true or not, at least it gives one some basis upon which to work. I think the choice between x-ray and radium is up to the individual. Personally, I prefer x-ray therapy, possibly because we have associated with us in Des Moines two very excellent radiologists who both manage the children exceedingly well. You also get more of a spread in the nasopharynx from x-ray than radium. Where competent radiologists are not available, the radium under the direction of the otologist is probably preferred. Usually irradiation is given in three or four treatments at weekly intervals, and a period of observation of several months should follow before any more is attempted.

My experience has been that the maximum effect of irradiation occurs in about three months. Over-treatment should be carefully avoided. It is not known what the latent effects of irradiation will be on the permanent teeth and the growth centers of the bones and other proximal tissues.

BIBLIOGRAPHY

1. Heineke, H.: Experimentelle untersuchungen über die einwirkung der Röntgenstrahlen auf innere organe. Mitt. a. d. Grenzgeb. d. Med. u. Chir., xiv:21-94, 1904-1905.
2. Crowe, S. J., and Baylor, J. W.: Prevention of deafness. J.A.M.A., cxii:585-590 (February) 1939.
3. Crowe, S. J., and Guild, S. R.: Impaired hearing for high tones. Acta oto-laryng., xxvi:138-143, 1938.
4. Crowe, S. J., and others: Impaired hearing in school children. Laryngoscope, lii:790-804 (October) 1942.
5. Fisher, G. E.: Use of radium in conduction deafness. Ann. Otol., Rhin., & Laryng., lii:473-476 (June) 1943.
6. Boies, L. R.: Irradiation of nasopharyngeal lymphoid tissue; evaluation. Arch. Otolaryng., xlv:129-140 (August) 1946.
7. Proctor, D. F.: Irradiation for elimination of nasopharyngeal lymphoid tissue. Arch. Otolaryng., xliii:473-480 (May) 1946.
8. Smith, John W.: Use of the nasopharyngeal radium applicator. J. Arkansas M. Soc., xliii:94-96 (September) 1946.
9. Neuhauser, E. B. D., and Ferguson, C. F.: Conductive deafness and its relation to lymphoid hyperplasia of the nasopharynx; benefits from x-ray therapy. M. Clin. North America, xxix:1251-1258 (September) 1945.
10. Fricke, R. E., and Brown, H. A.: Radium treatment of nasopharyngeal lymphoid hypertrophy. South. M. J., xxxvii:399-402 (July) 1944.
11. Harris, H. E., and Montgomery, E. L.: Treatment of lymphoid hyperplasia of nasopharynx by radium. Cleveland Clin. Quart., xliii:117-124 (July) 1946.
12. Crowe, S. J.: Change in technic for Monel radium applicator. Communication to Radium Chemical Co., June 19, 1947.
13. Proetz, A. W.: "Postnasal drip"; current American nightmare. Ann. Otol., Rhin., & Laryng., liv:739-746 (December) 1945.
14. Ashbury, H. H.: Radiation therapy of lymphoid tissue in nasopharynx and pharynx. Radiology, xliii:250-253 (September) 1944.
15. Crowe, S. J., and Walzl, E. M.: Irradiation of hyperplastic lymphoid tissue in nasopharynx. J.A.M.A., cxxxiv:124-127 (May) 1947.
16. Gay, L. N.: Treatment of residual lymphoid tissue in nasopharynx by radium. J. Allergy, xvii:348-351 (November) 1946.
17. Rentschler, H. D., and Settle, J. W., Jr.: Treatment of impaired hearing by radiation of excessive lymphoid tissue in nasopharynx. Pennsylvania M. J., xlvii:985-988 (July) 1944.
18. Hawley, S. J.: Roentgen treatment of lymphoid tissue in nasopharynx. Radiology, xliii:254-255 (September) 1944.

THE CARE OF PREMATURE INFANTS IN A SMALL HOSPITAL

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This paper makes no pretense of being an unbiased presentation of material regarding the care of premature infants in a small hospital. I am definitely presenting the negative side of the case. From both humanitarian and economic viewpoints, it seems to me desirable that the state provide places and funds for the care of premature infants as is now being done for crippled children and poliomyelitis patients. Lacking a vigorous federal program for the care of prematures, it is necessary for the states to act largely on their own initiative with the advice and encouragement of the Children's Bureau. You are undoubtedly familiar with the Illinois Plan as presented in the movie film which was made to publicize it.

I am opposed to the socialization of medical practice, but there are certain aspects of medical care which can be done more effectively by

groups than by individuals. Unless this program is sponsored by the doctors, need for better care of the premature infant will be another factor leading to the socialization of all medical practice. Prematurity of birth is frequently associated with caesarean sections or twin births which in themselves put a strain on the financial resources of the average wage earner. Also, first babies are many times premature. When in addition to the emotional strain a family is handicapped by starting out with a heavy financial burden, it becomes a serious social problem. But subsiding premature infants, as was done under the EMIC program, is not the entire answer either, as can be seen from this study.

The small hospital in Clinton upon whose records this study is based is an average hospital with 100 bed capacity. During the years 1943 through 1947, there were 2,243 live births there of which 89 were premature. The nursery consists of two rooms: an entry room, used also for warming formulas, scrubbing hands, changing gowns, and other such purposes; an inner room for babies, which has 198 sq. ft. of floor space and contains 15 bassinets. This provides only 13 sq. ft. of floor space per infant instead of the recommended 30. However, at the time that this survey was made, from 20 to 26 infants were being cared for, some in baskets in the main room and others in a carrier in the entry room. There are two incubators of an outmoded type and several boxes with electric bulbs to provide extra warmth. No reliable method for controlling the temperature which ranges from 65 F. to 95 F. is provided, and no attempt is made to regulate or even measure the humidity. Isolation for infection involves either putting the baby out in the entry room or sending it down to the sick children's ward. The linens are kept on open shelves, and a common bathing table is in the center of the room. Bottles are sterilized by an autoclave. During this period, no effort was made to clean the bottles properly beforehand, but they were merely rinsed and washed in warm tap water. The formulas are prepared downstairs in a small room off the sick children's ward where medications for these children are also handled. Formulas are prepared by an elderly woman (not a nurse), who comes in each morning to do this work. When droppers, Breck feeders, and the like are used, they are boiled in the entry room of the nursery. A graduate nurse is on duty in the nursery during the day. At night a student nurse is in charge, and she is sometimes helped by a graduate supervisor who circulates wherever she is needed most. Care of premature infants is a

nursing specialty for which both training and experience are essential. It is unfair to either baby or nurse to expect a student to be responsible for the care of premature infants without continuous, expert assistance and guidance. Nursing care is the more important, but expert medical supervision is needed as well if the premature infant is to have his best opportunity to survive.

Of the 89, living, premature infants born during the five year period from 1943 through 1947, recorded weights varied from 2 pounds 4 ounces to 5 pounds 6 ounces. Three babies were not weighed, even after death. The majority were between 4 and 5 pounds. It may be that this group is too small to be significant statistically for there is a reversal of the commonly accepted ratio of males to females. In this study the ratio is 42:47, and the death rate of males to females is 10:12.

In considering their care, it is interesting to observe how small some of these babies were when sent to their own homes from the hospital. One weighing 3 pounds 8 ounces was sent home while nursing from the breast but not gaining weight. Of the 16 babies who went home weighing less than 5 pounds, there is no way of knowing how many of these did so sooner than was for their best interest because of the costs of hospital and medical care. Several were readmitted shortly after being discharged. The average hospitalization period was 25 days. This was during the period when a considerable number of babies were cared for under the EMIC plan. If a depression comes, there will be much greater pressure to send premature infants home earlier. Of the 4 babies who remained until their weight was 6 pounds or over, one had several severe infections. There would have been more babies leaving under 5 pounds, but in several instances the family was afraid to take home a small baby even though its doctor had signed the discharge.

In regard to formulas, most of the data was obtained from the nurses' records. In many instances, no indication was made as to manner of feeding or ingredients of the formula, but the amount taken was carefully recorded. The nurses tried to put the smaller babies on three hour feedings, but there were several cases in which tiny babies were placed on four hour schedules with no extra fluids ordered parenterally. Some of the babies, who weighed between 3 and 4 pounds and who died, had been taken to breast to nurse by order of the attending physician before the milk had even started to flow. The recorded feed-

ings included breast milk when available, powdered milk, skim milk and canned evaporated milk. The usual methods of feeding prevailed with only a small percentage of gavage feeding since many doctors are reluctant to use this method when student nurses and frequently changing personnel are in charge of a nursery.

In view of the crowded conditions and the inadequate facilities for washing hands, it is remarkable that, according to the records, only 19 per cent, or 17 of the 89 babies, showed evidence of infection. Twelve transfusions were given to 8 of these infants. The type and degree of infection was not always plain from the record, but apparently involved the usual neonatal infections such as thrush, impetigo, pneumonia and diarrhea.

The most vulnerable period in the life of the premature infant is the first week, which is also true of infants born at term. It was surprising to find in this study that all of those infants who lived through their first eight days survived the hospital stay. It is during this first week that the type of care which can be given only at a special premature center would be of the greatest benefit. In the Clinton hospital there is a disproportionately high percentage of deaths during this period. If premature centers could be placed throughout the state to which the premature baby could be transferred immediately by ambulance, some of those who would otherwise die could be saved. Our record might be worse, but it can and should be better. The 1944 death rate, due to prematurity, of 11 to 1,000 live births is better than average, but we are comparing Iowa with states having a large non-white population, and statistics taken from the United States as a whole show that the death rate due to prematurity is much greater among the non-white population. Also, there are other states in which the population is so scattered that no hospital facilities are available for some of the premature infants. Under such circumstances, a rate of 11 to 1,000 in comparison with the rate of 11.5 to 1,000 for the United States as a whole is not a record of which to be proud.

In conclusion, I would like to quote part of a paragraph from a publication of the Iowa State Department of Health, Division of Vital Statistics, entitled, *Infant Mortality in Iowa During the Five Year Period 1942-1946*: "If we are interested in taking positive steps toward reducing the number of infant deaths in Iowa, a concentration of efforts among the very young, and especially the premature infant, would be most productive of results. This conclusion is based on the facts as illustrated in the diagram(s), to the

effect that over 60 per cent of all infant deaths occur within the first week of life and that premature birth is by far the leading cause of infant deaths."

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November 17, 1948**

Summary of Clinical Record

A 38 year old, white male was admitted to the University Hospitals on July 9, 1948, and died on July 22, 1948. The history was obtained from the patient who was oriented but confused. In 1942 he first noted pain in the right flank and back which radiated to the right lower quadrant of the abdomen. This was accompanied by nausea and vomiting and was followed by progressively deepening jaundice. The pain disappeared spontaneously in a few days, but the patient was hospitalized and noted distention of the abdomen, dark urine and stools.

After this there were no other complaints until 1947 with the exception of occasional blood-tinged stools and hemorrhoids. In July 1947, he had a sudden onset of the same right-sided pain, enlargement of the abdomen, and swelling of the arms and legs, followed in a few days by deep jaundice, dark urine and stools. He was nauseated and occasionally he vomited. There was anorexia with a loss of approximately 20 pounds. This episode lasted two months, incapacitating the patient for about one week. Recovery was again complete.

About one month before admission, there was recurrence of the pain in the right flank, nausea, anorexia, jaundice, swelling of the abdomen, and edema of the arms and legs. This was gradually progressive.

On July 5, 1948, the patient was found in his room unconscious and lying in a pool of blood. He was taken to a hospital where blood transfusions were given, after which he was admitted to the University Hospitals. He was delirious and bleeding profusely from the rectum.

The local physician stated that the patient had consumed large quantities of alcohol for a number of years. He had had an appendectomy in 1936 for a ruptured appendix and an abdominal operation in 1937 for a mass and pain in the right lower quadrant.

The physical examination revealed a chronically ill patient who was in a serious condition and hiccupping. There was intense jaundice, and numerous excoriations were on the skin. The tongue appeared normal. The respirations were shallow but adequate. There was pitting edema of the entire lower half of the body up to the lower thorax, including the forearms and hands. The axillary hair was sparse and over the chest the hair was absent. The blood pressure was 120/80.

Examination of the heart was negative except for a soft systolic murmur heard best along the left sternal border. The lungs were normal. The abdomen was protuberant and tense. A definite fluid wave was present. The liver was palpable three fingers' breadth below the costal margin, and the edge was sharp.

Examination of the blood on admission showed: hemoglobin 7.5 gm. per 100 ml.: erythrocytes 2,-

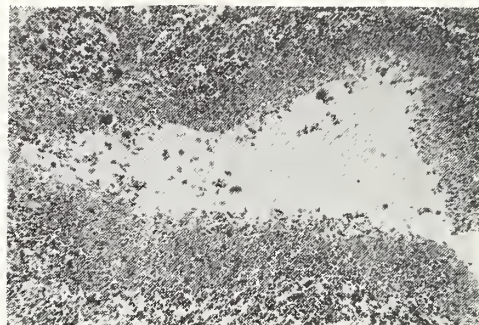


Fig. 1. Chronic abscess of pancreas.

620,000 per cu. mm.; leukocytes 20,000, 95 per cent of which were polymorphonuclear. The urine showed a 1 plus albumin and a 1 plus Meyer's test, but was negative on microscopic examination. There was a positive test for bile. The stools were dark brown in color and gave a 3 plus reaction to the Meyer's test. A paracentesis was done on July 10, 1948, and 1000 ml. of clear dark yellow fluid was obtained. The pathologist's report was "ascitic fluid sediment, poorly preserved."

Examination of the abdomen after the withdrawal of fluid revealed that the liver was no longer palpable and there were no other masses. Later the same day, the patient had a moderate hemorrhage from the rectum. This was not repeated. A roentgenogram of the chest taken July 12 was normal. A flat film of the abdomen showed dilated loops of bowel. The patient was given a high caloric diet and vitamins parenterally. On July 14 an esophagram was normal. Two days later the patient became semicomatose, was nauseated and began to vomit dark brown

fluid. Examination of the blood showed: hemoglobin 7.5 gm. per 100 ml.; erythrocytes 2,700,000 per cu. mm.; leukocytes 13,650 per cu. mm.

He became progressively worse and began passing small bloody tar-colored stools. On July 18 he became comatose and remained so until death July 22. A flat film of the abdomen on July 19 showed no evidence of intestinal obstruction. Treatment during the last several days consisted of fluids and vitamins parenterally. The temperature varied from 98.6 F. to 100 F. by rectum.

*Dr. Mayo Soley (Dean, College of Medicine):** The problem before us is either straightforward or, as Dr. Bean would say, "exceedingly unclear," at least to me. The patient was a 38 year old man whose past history is important, perhaps, in that he had two operations. Probably the one in 1936 was for a drainage of an appendix and the other in 1937 was for its removal. Undoubtedly these operations are not related to his present illness. The other important point is that he had been an alcoholic for a long period of years but apparently was all right, except for the episodes mentioned, until 1942 when he had pain in the right flank, back and lower abdomen, accompanied by nausea, vomiting and jaundice. These symptoms, or at least the pain, disappeared in a few days, but it took somewhat longer for him to get rid of the distention and his dark urine and stools. It is stressed in the protocol that he had dark stools which means to me that they contained bile, perhaps other things too. This is a story that is consistent with a hepatitis, cirrhosis or whatever you want to call it. I would judge the beginning was a series of episodes from which there was at least intermittent recovery. Apparently he was then well for about five years, except for occasional hemorrhoids and blood-tinged stools, until 1947 when he had a second episode. This would not be unusual in a patient who had a chronic hepatitis or cirrhosis. The only additional information we have here was that the patient lost weight and vomited and that the episode lasted two months. A year later he had a third episode with about the same symptoms except that, in addition, he had swelling of the arms and legs as well as of the abdomen. We have to assume that something more, perhaps, than distention of the gut or ascites occurred probably a change in his serum proteins so that he had generalized edema. I think edema of the arms here would have to be called dependent edema. When he came into the hospital, his symptoms had progressed to the point where he

was disoriented, delirious and bleeding from the rectum. This story is consistent with a chronic disease of the liver in which there had been some liver failure and in which the collateral circulation in the rectum had either accentuated the hemorrhoids which were already present or had brought them on, from which he lost this blood.

On physical examination, this man looked

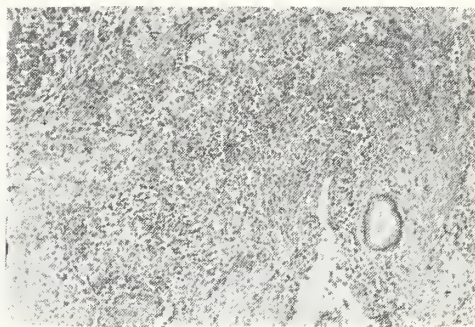


Fig. 2. Acute and chronic pancreatitis.

chronically ill. He was hiccupping, which may or may not have gone with the pain he had before. Patients with cirrhosis or hepatitis may have perihepatitis with resultant hiccupping; they may have distention of the abdomen with gas in the bowel or they may have ascites, either of which might cause pressure on the diaphragm and hiccupping; or they may have renal involvement and uremia with hiccupping. There is nothing at the moment to tell us which one of these things occurred, although later on I think we find that the kidneys are normal enough to exclude the latter possibility. There was intense jaundice and numerous excoriations on the skin. I think if one analyzed large groups of patients with jaundice he would find that itching is somewhat worse in obstructive jaundice than it is in other kinds, but with severe jaundice it would make little difference whether it was obstructive or not. Of course, one has to consider that cirrhosis could be not only on an alcoholic (nutritional) basis, but also could be on the basis of a stone and biliary type with an ascending infection in the biliary tract, although I think this man's story is quite inconsistent with the latter because he has not had fever and chills and no chronic type of a febrile illness is evidenced by the history. That the tongue appeared normal doesn't necessarily eliminate nutritional deficiencies and merely means that the person who examined the tongue didn't think it was abnormal enough to be noted as such. He had anasarca, and the axillary hair was sparse. I don't think it is abnormal to have no hair on one's chest,

*Discussed without knowledge of pathologic findings.

but I suspect in males if one finds rather sparse axillary hair it is generally due to some change. In this case it is probably related to the failure of the liver to change estrogens into an inactive form. The blood pressure is not remarkable. There is no note made as to whether any mammary tissue was palpable, although we should be interested in such a finding in this case. The heart was normal except for a soft systolic murmur, heard best along the left sternal border. In the presence of anemia, I think we need assign no other cause for this finding. Apparently, the abdomen was full and tense with a fluid wave. The liver was palpable three fingers' breadth below the costal margin, but the upper border is not noted. I think there is no use discussing a palpable liver until one knows where the upper border is unless the liver is tremendously enlarged. There is nothing said about the spleen, but even large spleens are not particularly palpable if there are ascites, so that wouldn't be a crucial point in eliminating the diagnosis of a chronic liver ailment.

As far as the laboratory is concerned, the man had anemia which I suppose is close to being normocytic or normochromic which is quite consistent in cirrhosis. We are apt to stress the macrocytic anemias, but they occur in one-half or less of the patients who have cirrhosis. There is a leukocytosis and a shift to the left of polymorphonuclear leukocytes, but I don't think that need worry us in terms of being specific because too many things could cause that—for instance, acute necrosis of the liver. The urine was not remarkable except that there was some albumin and apparently no blood, although the Meyer's test was positive. Bile was present in the urine as well as in the stools, and a positive test for blood was found in the stools as one would expect from the story. A paracentesis revealed fluid which is consistent with ascites that would occur in cirrhosis. After removal of this fluid, the liver was no longer palpable, and the upper border is again not discussed. Even then there were no other masses felt, and the spleen was still not palpable. Soon after these findings, the patient had a second hemorrhage, following which roentgenograms taken showed dilated loops of bowel (probably small bowel) which is quite common with ascites. The chest was normal, and an esophagram was normal. I don't think the normal picture of the esophagus eliminates the possibility of esophageal varices, as the patient could have varices in the upper portion of the gastric mucosa which could be missed on the esophagram.

The patient became progressively worse, continued to bleed through the rectum, was considered to have possible obstruction which was not proved by radiograph, and in spite of supportive treatment died, having had no more fever at the terminal stage than one would suspect in a case of chronic hepatitis. Now there are a few "hook-

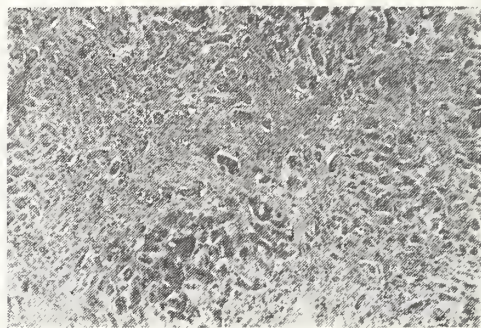


Fig. 3. Biliary cirrhosis.

ers" here. If a rectal was done, it wasn't mentioned. If it wasn't done, it should have been. In any case, I don't think it should have shown more than hemorrhoids and perhaps fecal material, except a malignancy unrelated to the patient's disease through a period of years. Also, nothing is mentioned about vascular spiders. We would like to know, too, about the serum proteins, particularly in terms of a lowered albumin fraction, to see if that played some part in the patient's edema.

The differential diagnosis could be gone into in detail, but I'd like to discuss a few points in favor of the diagnosis of cirrhosis first. Pain is not appreciated as being as common as it is. Rathoff and Patek noted in 1942 that in 386 patients pain occurred in approximately one-third of their series and was a presenting symptom in about 10 per cent. Pain, regardless of its origin, is not inconsistent with an acute hepatitis, and so I do not think we have to suspect any block of the extrabiliary system although we should consider it. It's hard for me to consider a story like this consistent with a stone and/or infection in the biliary tract and cirrhosis from that cause. A pancreatic stone should be considered, but I don't see how the pain in the patient is very consistent with it. The evidence of liver insufficiency occurred far too early to be part of the pancreatic stone, pancreatic destruction, and the cirrhosis which one sees later in the course of at last two of the patients with that disease that I have followed. That is consistent, also, with the findings in the literature. I think a tumor of the pancreas or extrabiliary system is exceed-

ingly unlikely. In the first place, the patient has lived too long and the story is not consistent with it, with the possible exception of an angioma of the liver.

Even though we could think of a lot of other diseases, I think that this patient most likely had a chronic hepatitis or Laennec's cirrhosis with repeated episodes. The first he recovered from, and the latter caused his demise, probably through two mechanisms: (1) bleeding from the collateral circulation in the rectum or (2) from the bleeding tendency from the gut that could occur from severe liver damage. Although there is no discussion of the patient's prothrombin level, he could have had both of these mechanisms coming into play. Finally, even though the single urine discussed here does not give us any evidence of it, we should consider, and possibly eliminate, the possibility of the kidney being indicted with the liver to make up the combination of cholemic and renal failure that one sometimes sees in these patients. I think no evidence for that is present and that one could account for the man's death on the other mechanisms that I have mentioned, namely, the hepatic failure and the bleeding from the collateral circulation. I doubt that the post-mortem findings will substantiate the fact that there are no varices in the esophagus but, after all, the patient may not have had any of these diseases so we don't know.

Dr. D. W. Sinton (Medicine): We had Dr. Soley at a great disadvantage. Unfortunately, a great number of laboratory studies were done which were omitted from the protocol by error. They are present here. (See Table of Laboratory Findings on page 19.) Our clinical diagnosis was Laennec's cirrhosis of the liver.

Dr. E. DeGowin (Medicine): I'd like to point out that these extra laboratory findings would make no difference in the clinical diagnosis:

Student: What is Hanger's Test?

Dr. Sinton: It is the cephalin flocculation test.

Necropsy Findings

The pertinent autopsy findings were in the liver, biliary system, pancreas and kidneys. The liver weighed 1,800 gm., was dark green and finely nodular. Histologically, the classic changes of moderately advanced *biliary* cirrhosis were seen. Bile stasis and bile proliferation were conspicuous, whereas the architectural pattern, although somewhat distorted by the fibrosis, remained generally preserved. Any suggestive changes of *Laennec's* cirrhosis were, for the most part, obscured by the morphologic findings of biliary cirrhosis.

The probable cause of the cirrhosis was a chronic suppurative pancreatitis. The abscesses appeared to have been long-standing and they involved the duct system as well as the parenchyma. The common and cystic bile ducts were patent, not appreciably dilated, and contained dark green, inspissated bile. There was a large blood clot of approximately 500 cc. volume in

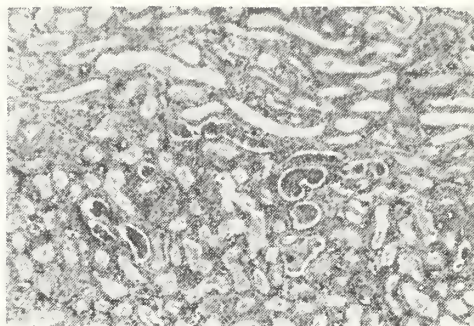


Fig. 4. Bile nephrosis.

the stomach. The large and small bowels were filled with black fecal material. There was no evidence of ulceration of the gastro-intestinal tract and no esophageal varices could be demonstrated. However, petechiae were present in segments of the small bowel.

The kidneys were enlarged, each weighing 300 gm. They were deeply bile-stained, as were all the viscera and skin. Histologically, they showed rather severe bile nephrosis with extensive tubular degeneration.

Necropsy Diagnosis

Chronic suppurative pancreatitis
Biliary cirrhosis
Bile nephrosis
Jaundice.
Desquamative and lobular pneumonia
Pulmonary edema
Anasarca
Mesenteric and periaortic lymphadenopathy

Dr. J. Carter (Pathology): There are a few points relative to this case that require comment. One is the cause of the bleeding. We did not find any varices either in the stomach or the esophagus. I should point out, however, that varices are extremely difficult to demonstrate unless the loops of certain segments of the esophagus are tied off, or unless they are injected or some other method used which would make them visible. The lack of finding esophageal varices does not mean that they had not been present. On the other hand, with the prothrombin times of one, 58 per cent; two, 60 per cent; three, 74

per cent (and bear in mind that these were done at the time when vitamin K therapy had been instituted), it is quite possible that the bleeding was due to a lowered prothrombin concentration. Incidentally, at autopsy we found 500 cc. of blood in the stomach and black fecal material throughout the entire gastro-intestinal tract. The cause of the pancreatitis is also somewhat obscure. We can only speculate on the possibilities. There was no aneurysm, which is sometimes a cause of pancreatitis. We found no evidence of edema of Oddi's sphincter. One can speculate on the spasm of the ducts of Wirsung and Santorini, and of the common duct, but at autopsy there is relaxation of these structures. There was no evidence of infection other than that in and around the pancreas. It is also known that tying off of the ducts of Wirsung and Santorini will produce an acute pancreatitis, and physiologically this may have occurred. One thing though should perhaps be emphasized. It is a common observation that chronic alcoholics not infrequently develop acute pancreatitis. The correlation is better than what one would expect fortuitously. It is explained by the fact that alcohol will cause edema and hyperemia of the duodenal mucosa and the sphincter of Oddi, and also will cause marked stimulation of the pancreatic and gastric secretions. That is, of course, possible in this case. I should like to emphasize again the fact that these abscesses in the pancreas were of long duration—at least weeks, and perhaps months. It was not an acute or apoplectic type of pancreatitis, nor was it the acute necrotizing hemorrhagic type. The process was old, very extensive and definitely suppurative. One point in connection with the bile nephrosis should be mentioned; in practically every case of jaundice that we autopsy there is some degree of bile nephrosis, but, obviously, the number of individuals that develop anuria are few. I would like to point out that the clinical pathologic correlation is not good in patients with bile nephrosis. So, in summary, this is a case of biliary cirrhosis in which there was a chronic suppurative pancreatitis, presumably the cause of the biliary cirrhosis. The bleeding may or may not have been due to esophageal varices. It could be explained on the basis of lowered prothrombin concentration.

Dr. Franklin (Medicine): Did you find the bile ducts dilated?

Dr. Carter: Neither the common nor cystic ducts were dilated. Both showed minimal bile staining, and the duodenal mucosa showed some bile staining.

Dr. Franklin: Are you calling this a primary

biliary cirrhosis or a secondary? The difference is very important because one is a surgical condition and the other medical.

Dr. Carter: We feel from the autopsy findings that it is secondary, but it is a difficult thing to prove in view of the extensive long term suppurative process in the pancreas. We postulated an ascending infection with perhaps temporary or transient periods of obstruction by inflammatory exudate. We found no evidence of obstruction, however. It is a difficult thing to prove, and histologically it is frequently impossible to distinguish between the two processes.

Dr. Franklin: I think it is important to establish whether this is a primary biliary cirrhosis, a biliary cirrhosis which is due to something in the liver or to obstruction of the smaller bile ducts within the liver, or whether it is due to a secondary biliary cirrhosis outside the liver. If it is secondary, either to pancreatitis, obstruction of the common bile duct, to carcinoma to the head of the pancreas, to stones, or to strictures, it is a surgical problem. I agree that this case looks like a primary biliary cirrhosis due to infection. The patient was jaundiced. In 1942, he had attacks due to infection which quieted down. There were succeeding attacks, gradually the liver became more and more damaged, and eventually the patient died in cholemia. In secondary biliary cirrhosis, ascites does not appear until terminally. This man had an attack in 1942 which looks as though he had an attack of some kind of infection producing a hepatitis and he had ascites. He had another attack with ascites. This is not the usual picture with a stone or with an obstruction from carcinoma unless it is terminal. The small nodules found on gross pathologic examination and the histologic picture would go with a primary cirrhosis, secondary to the infection in the pancreas. The importance of this, I believe, is that one is not surgical and the other is. I believe that this man did not have an obstructive jaundice, and that is shown by the fact that they did not find dilatation of the bile duct. If there is obstructive jaundice, there should be dilatation of the bile duct. There can be obstruction within the liver due to infection which is called cholangitic cirrhosis, and I believe the histology is compatible with that. The severe amount of cholangiolitic proliferation seen here is not observed frequently in obstruction of the bile duct. That is seen more often with the infection usually around the portal triads. I think the diagnosis here is that of a medical cirrhosis, secondary, I agree, to the chronic pancreatitis.

Dr. C. Millikan (Neurology): How long do you think the chronic pancreatitis existed?

Dr. Carter: It is at least a matter of weeks and perhaps months.

Dr. Millikan: How would that explain the repeated attacks of jaundice over a period of several years?

Dr. Carter: The degree of fibrosis that is present certainly could have been present for years. The change could have been produced in a matter of months, and, like old cardiac infarcts, it is difficult to distinguish the fibrosis that occurs in a six months' infarct from that which occurs in a year. I don't think there is any difference of opinion regarding the type of cirrhosis. We don't ordinarily distinguish the two types. When I said there was no difference between types of cirrhosis, whether surgical or medical, I meant just that, because, histologically, in a cirrhosis that has advanced this far, it is virtually impossible to make a distinction. As a matter of fact, at a recent Macy Foundation conference in New York, in regard to liver disease, the consensus

was that the various types of cirrhosis could not be distinguished frequently, particularly cirrhoses that have progressed to the point which this one had, in which the fibrosis and the bile duct proliferation are so striking. In this particular case, we feel that the infection did play a great part and that the degree of obstruction that may have been present was purely a transitory affair if it was present at all. The pancreatitis may well have been the precursor and cause of the cirrhosis.

Dean Soley: My interpretation of pancreatic pain is that it usually goes through the back, not around, which is one of the nicest differential points, historically, I think you can get. I'd like to know if the history is incorrect on the interpretation of this pain and if the pain did go through the back—or do we have no previous evidence of pain from pancreatitis?

Dr. Sinton: This man never clearly described his pain. However, it was not in the back. It was in the right side along the rib margin.

Dean Soley: Did he ever have any episodes

•LABORATORY FINDINGS

		July 9	July 12	July 13	July 14	July 15	July 16
Plasma protein (gm. per 100 ml.)	Total	5.77					
	Albumin	1.75					
	Globulin	4.02					
Van den Bergh's reaction on serum (units)	Total	19	18				
	Direct	17.3	15.4				
	Indirect	2.7	3.0				
Prothrombin (% of normal)				60		58	74
Bromsulfalein Test (% retained in blood)			37.5				
Thymol turbidity test on serum (units)		8.5					
Bilirubin of urine (mg. per 100 ml.)		16.0					
Urobilinogen of urine (mg. per l.)		1.7	4.0				
Urobilin of feces (mg. per 100 ml.)		14.0	20.0				
Hanger's Test	24 hours	2+					
	48 hours	4+					
Alkaline phosphatase of serum (units)					3.4		
Zinc sulphate flocculation (units)		19.8					
Galactose tolerance (gm. recovered)				0.43			
Hippuric acid synthesis (gm.)				0.56			
Blood urea nitrogen (mg. per 100 ml.)				14.0			
Blood creatinine (mg. per 100 ml.)				1.0			
Erythrocyte sedimentation rate (Westergren), (mm. in 60 minutes)				80			
Hematocrit				25%			
Bleeding time (minutes)				3			
Coagulation time				5' 30"			
Prothrombin time (control, 32")				52.6"			
Clot retractility				partial			
Erythrocyte fragility, hemolysis began saline acid was complete				0.38%			
				0.28%			
Platelets (per cu. mm.)				74,000			
Reticulocytes				9.7%			

with fever and chills, or any evidence of infection in the bouts which he had prior to his entry to the hospital?

Dr. Sinton: It was specifically asked and denied. It was omitted from the protocol as negative evidence.

Dean Soley: Well, I still think it is an unusual problem because the absence of those two symptoms with these findings leads you into a lot of trouble if you try to make this diagnosis in most patients.

Dr. Sinton: Incidentally, the rectal examination was negative for hemorrhoids.

Dr. Wm. Bean (Medicine): I think this is an excellent demonstration of the difficulty in trying to make a diagnosis of this type of cirrhosis from the signs and symptoms and from the clinical findings at a given state of the disease, even with all the laboratory help available, unless one has a history. I doubt the history, not as it was obtained from the patient, but in his own recollection of what happened, because it is most unusual that something more suggestive of infection did not take place in the past. The whole problem of the classification of cirrhosis is one which undergoes a change from time to time. The pandemic of hepatitis during World War II and the differentiation of homologous serum hepatitis from ordinary infectious hepatitis has reawakened considerable interest because there were thousands of soldiers and sailors who had hepatitis in the Army and Navy. The question is quite pertinent as to whether or not those people will have an increased tendency to develop cirrhosis in the future and, if so, what will be the course of their disease.

The classification of cirrhosis was either confused or clarified by Hanot, depending on whether you read what he said or follow what others have called Hanot's cirrhosis. It is very difficult to tell whether Hanot or Banti really dealt with a number of different conditions or whether there was a true entity concerned. What happens after hepatitis can be divided roughly into three categories: (1) postnecrotic cirrhosis, (2) chronic hepatitis, and (3) clinical cure. Postnecrotic cirrhosis may develop after massive hepatitis with acute yellow atrophy in which there is an enormous destruction of liver cells, and in which the patient is *in extremis* but somehow manages to recover. When repair takes place, the liver has vast nobs, not the small, tiny, or relatively little hobnails of Laennec's cirrhosis, but broad fibrous tissue bands dividing the regenerated liver into several sections. Perhaps there is an analogy

between that and hepar lobatum in which a gumma recedes and fibrous tissue forms. That condition, depending on recovery from massive yellow atrophy of the liver, is relatively uncommon. Another state is the slow emergence of chronic hepatitis from acute hepatitis with repeated bouts of jaundice in which there is no particular relationship to a biliary tract disorder. The condition may be influenced, as perhaps it was in this patient, by an intercurrent addiction to alcohol. It is conceivable that what he had at the beginning was not the terminal pancreatitis. He may have had an early Laennec's cirrhosis or a fatty liver instead of an infection, or a cholangitic or cholangiolitic cirrhosis; finally something happened to his pancreas; perhaps in the last year of his life, and he developed a superimposed disease which changed fairly completely the underlying pathologic lesions. We don't know what happens when several agents which can lead to a cirrhotic condition in the liver combine and produce their multiple effects. All that can be determined is that the final picture here, pathologically, is one that fits into the cholangiolitic picture of cirrhosis. It is worth emphasizing that, concerning the clinical stage of the disease at its end, it is not only impossible to discriminate between what went on in the past, but it is of no moment because the distortion of the liver architecture here has done two things. It has eliminated the cells from their ordinary function, and it has produced an obstruction to the flow of the blood through the liver. Whether or not he did have varices in his stomach and esophagus which collapsed and disappeared after death may not be determined, but it is a possibility. With terminal cholemia, jaundice and hemorrhage, there is no way of determining clinically whether it resulted from alcoholism and the development of Laennec's cirrhosis or because of some obscure infection ascending the radicals in the biliary system and producing the biliary type of cirrhosis.

This case brings up the absolute necessity of getting an accurate story of the natural history of the disease as it is going on, because at the end stage you can't tell in this particular type of chronic disease of the liver which type of mechanism prevailed in bringing about the result that came to pass. It is more important in the earlier stages of the disease because something can be done to prevent or relieve one type, but we don't know of anything that can be done to prevent the type in which infection prevails.

Dr. Warner: I'd like to ask how much evidence of portal obstruction there was. In other words,

was the ascites out of proportion to the anasarca and the proteins?

Dr. Carter: No, he had 200 cc. of clear, straw-colored fluid in his peritoneal cavity at the time of autopsy. There were approximately 50 cc. in the pleural cavity bilaterally. There was edema of the legs extending up as high as the umbilicus and some edema of the arms, but there were not excessive amounts of fluid in the abdominal cavity.

Dr. Warner: Did he have any dilated collaterals?

Dr. Carter: No, no spider angiomas were observed and no obvious varicosities were seen.

Dr. Montgomery (Medicine): Did the gallbladder show any pathology which might have accounted for some of the changes observed in this case?

Dr. Carter: That's a difficult question to answer because there was a mild degree of chronic cholecystitis, but hardly enough, one would think in examining the tissues, to account for the changes that were observed. It is possible but not probable, I would say. He had no stones. The mucosa was everywhere intact. The gallbladder wall did contain a few foci of chronic inflammatory cells, not much more than in anybody of that age.

Dr. Franklin: I recall the conference which Dr. Carter has mentioned. Someone at that conference in discussing etiology and classification of liver disease paraphrased Winston Churchill and said, "Never have so many known so little about so much." In 1946, Dr. Harry Goldblatt, realizing our meager knowledge concerning different forms of cirrhosis, especially of the postnecrotic variety, asked eight of the leading liver pathologists to submit to him ten to fifteen blocks of liver from patients in whom the clinical diagnosis of Laennec's or postnecrotic cirrhosis was made. He collected 106 cases, made eight sets of slides and submitted the sections as unknowns to the eight participants. The diagnoses were submitted to him. Having worked at the time with Dr. Popper, I happen to have seen the slides. On the basis of microscopic examination alone, there was complete agreement by all eight men on only 19 out of 106 cases. After revision of the diagnoses on the basis of information given by clinical history and autopsy protocol, there still was complete agreement in only 34 cases. Several things, however, were agreed upon—namely, that there were two main types of cirrhosis, one a postnecrotic variety and the other Laennec cirrhosis. In this latter variety, although the majority

may have arisen from malnutrition, alcoholism and other unknown factors, a small minority may have had its origin in viral infection (cholangiolitic type). The end results of both, clinically and pathologically, may be such as to make all these types undistinguishable.

Dr. Layton (Pathology): Since everyone is speculating, I might speculate just a little too. The fact of the appendectomy in 1936 and the operation this patient had in 1937 has been completely ignored. Since we are speculating for a cause of this man's condition which developed over a period of years, it might be worthwhile to point out that infections which drain into the portal area may very well produce a hepatitis and often times the cholangitic and cholangiolitic types. Dr. E. Graham in about 1918 injected virulent organisms into the portal veins of dogs and experimentally produced a severe hepatitis, pancreatitis and cholecystitis. It is conceivable that at this time, 1936-1937, this particular patient may have had subclinical hepatitis which inaugurated the chain of events. We speak of foci of infection and, though it's in disrepute at the present time, we could speculate that foci of inflammation were left in this man's gallbladder, and perhaps even in the pancreas, which eventually led to the suppurative pancreatitis which he had terminally. That is pure speculation, but you should recall that infections which drain into the portal system can give hepatitis and pancreatitis and cholecystitis. Another thing on which I might make one statement, to which Dr. Franklin has referred, concerns how long it takes to develop cirrhosis of the liver following an acute attack of hepatitis. It is true that the answers are not known yet; however, the English group of workers, Drs. Dydlmick, Michael and Sherlock, do have at the present time a series of 9 cases which they have followed from 1942 and 1943, and it was recorded that these 9 patients in 1948 seemingly have developed cirrhosis from a preceding acute hepatitis.

AMERICAN COLLEGE OF SURGEONS 1949 SECTIONAL MEETING

The two-day Sectional Meeting of the American College of Surgeons will be held February 11 and 12 in the Hotel President, Kansas City, Mo., for physicians and surgeons and professional personnel of hospitals. Conferences for both groups will run concurrently, and prominent local and visiting medical and hospital authorities will address the sessions. Latest developments in medical science and hospital service will be presented.

STATE DEPARTMENT OF HEALTH



SELECTIVE SERVICE BLOOD TESTING PROGRAM

Pursuant to conferences between staff members of the Department of Defense, the National Headquarters' Selective Service System, and the Venereal Disease Division of the Public Health Service, a plan has been established providing diagnostic and treatment services for recruits and selectees with evidence of venereal disease.

A special form, PHS-956, "Report of a Suspect or Case of Venereal Disease Among Persons Examined for Military Service," has been designed as a medium by which joint Examining and Induction Stations notify selectees who must report for diagnosis and/or treatment. The selectee makes the decision as to whether he will report to a clinic or private physician. He presents a blue copy of the form which is completed by the examining physician after a diagnosis is made, whether infected or not infected. The selectee returns the form to the Induction Station.

The only exception to the above arrangement is when the blue copy is marked "rejected." Such exceptions may involve a previously diagnosed or treated case. These cases will require evaluation to advise rejected selectees regarding the status of their infection. It would seem advisable that selectees found infected and requiring treatment should either be referred to the nearest Rapid Treatment Center or placed on ambulatory treatment utilizing Duracillin to insure a full course of treatment before actual entrance into military service. At the time the selectee receives his blue copy of the form, the State Health Department receives two duplicate copies. One copy is referred to a public health nurse who either will visit the selectee to refer him to his physician in the event he is delinquent in reporting or to receive the physician's recommendations as to treatment or no treatment. The nurse sends her completed copy of the form to the State Health Department where the final copy is completed and referred to the Induction Station. From there the form is referred to the Statistical Division of the Public Health Service. Although

fewer men are being inducted into the armed services as a result of the Selective Service Act of 1948, careful investigation of venereal disease suspects and their contacts can be a valuable aid to local health departments in their case-finding program. Syphilis among persons in the age group being processed for military service can almost uniformly be considered as potentially infectious. As a result, physicians, local health departments and public health nurses are requested to expedite action to insure diagnosis and treatment in all cases.

The value of the program is evidenced by the fact that out of the first 1,051,985 selectees examined prior to World War II 47,552 cases, or 45.2 per 1,000, were found infected with syphilis.

HOSPITAL SURVEY AND CONSTRUCTION PROGRAM

The Hospital Survey and Construction Act, Public Law 726, provides federal assistance for the construction of hospital facilities to the extent of one-third of the cost of the project. The act requires that each project meet standards set forth by the U. S. Public Health Service in order to qualify for aid.

The approval of the plan made immediately available to the state of Iowa \$1,341,450 of federal funds for grants-in-aid for the construction of hospitals.

The great public demand for hospital construction together with the limited federal funds available to the state necessitates the strict adherence to the priority system established in the Iowa Hospital Plan. The priority system is based upon relative need to render those areas without existing acceptable hospital beds immediate participation if they can qualify with the financial requirements of the law. All of the communities in which hospitals are proposed in the State Plan have shown great interest in participating in the program. Construction in many of the areas now having a rather low relative need as a result of existing acceptable hospital beds has been

necessarily delayed because of limited federal funds. Other areas with a high priority have not been able to show sufficient matching funds to meet the high cost of hospital construction at this time. Consequently, it is necessary to meet with all communities to review their construction program and to demonstrate to their own satisfaction that they do not have sufficient funds now available, or that their relative need is not as high as other areas, or that the project is immediately acceptable. In developing 18 acceptable hospital projects since Feb. 11, 1948, the staff has repeatedly met with the sponsoring groups from 84 communities desiring to construct hospitals under this program.

The first allotment of federal funds in the amount of \$1,341,450, made available to the state Feb. 11, 1948, was allocated to 10 communities on May 11, 1948.

The second allotment of federal funds was made available to the state of Iowa on July 1, 1948 in the amount of \$1,393,932 and was allocated to eight communities on Oct. 15, 1948.

Application for the hospital projects consists of four parts and a large number of supporting and substantiating documents. The applications must be approved by the Division of Hospital Services and submitted to the U. S. Public Health Service for review and approval. Together with the four parts of the application and the substantiating documents, each applicant must submit architectural drawings which must be reviewed and approved in the schematic, preliminary and working drawing stage. The review must cover the functional as well as the structural stability and the proper operating of the mechanical, electrical and sanitary features of the hospital. Upon approval of the four-part application and three stages of drawings, the project must be advertised for bids, and contracts let. The progress of the work during construction must be determined periodically for certification for payments.

HOSPITAL LICENSING PROGRAM

In accord with Chapter 91, Acts 52nd General Assembly, the Hospital Licensing Board was organized early in January 1948 and, in cooperation with the Division of Hospital Services, prepared the Rules and Regulations for the Licensing of Hospitals and Related Institutions during four monthly conferences. These Rules and Regulations were approved by the Licensing Board on June 30, 1948 for submission to the State Board of Health for final approval and promulgation by the Department. On July 13, 1948, they

were adopted by the State Board of Health to become effective Dec. 31, 1948. The publication was received from the printer Sept. 15, 1948. Following certification to the county auditors, they were immediately distributed to all hospitals and such related institutions as county medical societies, county osteopathic societies, state and county nursing associations, architectural firms, county and city health offices, news agencies and interested individuals.

Application blanks have been prepared and are now being sent to all the hospitals. These applications are to be returned before Dec. 31, 1948 with the initial license fee for 1949. It is not contemplated to issue a license to any institution before the application is returned and a complete survey is made and evaluated by representatives of this Division.

NURSING HOME LICENSING PROGRAM

Chapter 92, Acts 52nd General Assembly, became effective July 4, 1947, and soon thereafter steps were taken to license the nursing homes under the Rules and Regulations adopted July 8, 1947. Provisional licenses were issued to the known homes upon application. During November and December 1947, and continuing into 1948, the district office personnel of the State Department of Health made preliminary surveys of the nursing homes at the expense of their regular duties. On Jan. 1, 1948, 294 such surveys had been made by the district engineers and the district public health nurses in their respective areas. This work was completed early in 1948 with a total of 387 surveys. A total of 379 provisional nursing home licenses were issued to June 30, 1948.

Since July 1, 1948, two consultant nurses have spent full time on the nursing home licensing program. All nursing homes making application and those found in the field are surveyed to ascertain their compliance with the Rules, Regulations and Minimum Standards Governing the Operation of Nursing Homes. To date, 507 nursing homes are known to be or have been in operation. Of these, 261 have been surveyed since July 1, 1948. Licenses are now being issued to nursing homes only after a survey reveals compliance with all the requirements and, in addition, the local fire authority and the local health authority certifies compliance with the fire safety and the state housing law. The homes unable to meet these conditions are allowed a reasonable time to make improvements or are notified to discontinue operation. On Oct. 26, 1948, a total of 124 nursing home licenses had been issued for this fiscal year.

The JOURNAL of the Iowa State Medical Society

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As Another Year Begins

At the beginning of a new year, it is a time honored and altogether fitting tradition for the JOURNAL to extend to its readers the best wishes of the holiday season and to look forward to the possibilities for the year ahead. Any prognostication as to the future of medicine remains as obscure or even more so than at any time in our history. Certain it is that the trend toward socialized medicine will persist even more strongly than heretofore. This factor was forcibly noted at the interim session of the A. M. A. in St. Louis last month. A decision was made that the A. M. A. should assume a more active role in the defense of the profession against the inroads of political groups. However, it immediately becomes apparent that the individual doctor still remains the key man who must take off his coat, roll up his sleeves and go to work if the professional politician is to be thwarted. Each physician is in a position to improve public relations more adequately than any single group. Medical progress has been made possible by individual liberty under constitutional, representative government, and this fact must be doubly impressed in no uncertain terms upon the general public. Each doctor holds an unusual opportunity in the education of his own patients. The unified efforts of the profession could accomplish much during the coming year if all cooperate.

The JOURNAL again hopes to increase its usefulness in the months ahead. Your suggestions are welcomed. The value of the JOURNAL to its readers lies in the extent to which it is uti-

lized. This implies a joint effort, and perhaps no better resolution could be made upon the threshold of the new year than that each physician resolve to extract the last full measure of value from our JOURNAL which it is capable of giving.

New Assistant Editor

This month, the JOURNAL announces the resignation of Viola Turner, who is taking up the duties of a housewife, and welcomes Janet N. Fowler, the new assistant editor.

At this time, it is desired to express our appreciation for the faithful and efficient services of Miss Turner. We wish her success and happiness.

The \$25 Assessment

Every physician in Iowa probably knows that the House of Delegates, which met in St. Louis December 1, voted a \$25 assessment on every member of the American Medical Association. Money raised by this assessment will be used to expand the Washington office so that it may become more active in providing information to government officials about health matters and to conduct a public relations program designed to educate the people of the country in what compulsory health insurance would really mean to them. "Free medical care" has a nice sound, but when the taxpayer finds that the cost through taxation is much higher than he is now paying by a voluntary method and when he learns the service in other countries has steadily deteriorated, he may change his thinking.

A planning committee of ten members was appointed by the trustees, and it has started to function. The public relations firm of Whitaker and Baxter of San Francisco has been employed to direct the entire campaign. This firm directed the campaign of the California Medical Association which defeated the program of compulsory health insurance proposed in that state by Governor Earl Warren.

It is planned to build the American Medical Association public education campaign around the following three objectives:

1. To awaken the people to the danger of a politically controlled compulsory health insurance system.
2. To acquaint the people with the superior advantages of American medicine over the government-dominated medical systems of other countries.

3. To stimulate the growth of voluntary health insurance systems and prepaid medical care plans to take the economic shock out of illness and to increase the availability of medical care to the American people.

A booklet, "Uncle Sam, M.D.," was mailed to every physician in the United States before December 30. This will provide background material for speakers in the campaign. A letter explaining the assessment will also be sent to every physician by the American Medical Association.

It is our understanding that payment of this assessment is voluntary. Nonpayment will not deprive a physician of his membership in county, state and national medical groups. This is as it should be in a democratic system. Iowa physicians have long advocated that the American Medical Association take a more active part in economic and political matters, and we are confident that they will do their share, both financially and individually, to help make the educational program a success.

The World Medical Association

At a meeting of the General Assembly in Geneva in September, 1948, the World Medical Association adopted without dissent twelve resolutions, namely:

1. Freedom of choice of physician by the patient. Liberty of physician to choose patient except in cases of urgency or humanitarianism.

2. No intervention of third party between physician and patient.

3. Where medical service is to be submitted to control, this control should be exercised by physicians.

4. Freedom of choice of hospital by patient.

5. Freedom of the physician to choose the location and type of his practice.

6. No restriction of medication or mode of treatment by physician except in case of abuse.

7. Appropriate representation of medical profession in every body (official) dealing with medical care.

8. It is not in the public interest that physicians should be full-time salaried servants of the government or social security bodies.

9. Remuneration of medical services ought not to depend directly on the financial condition of the insurance organization.

10. Any social security or insurance plan must be open to the participation of any licensed physician, and no physician should be compelled to participate if he does not wish to do so.

11. Compulsory health insurance plans should cover only those persons who are unable to make their own arrangements for medical care.

12. There shall be no exploitation of the physician, the physician's services or the public by any person or organization.*

These resolutions serve as a basis upon which to build a positive and effective resistance against the kind of thinking which would make the medical profession a captive political tool. By enrolling as a supporting member of the United States committee of the World Medical Association, each physician can lend his moral and financial aid to the promotion of higher levels of medical care and public health throughout the world and to the development of improved international relations. Such memberships are available at the office of the World Medical Association, 2 East 103rd Street, New York 29, N. Y.

Report of Meeting of House of Delegates of the American Medical Association

The House of Delegates of the American Medical Association held its interim session at St. Louis, Nov. 30 and Dec. 1, 1948. At this meeting, reports of officers were submitted instead of at the annual meeting as has been the custom. As might be expected, these dealt with problems of medical education and hospitals, emergency medical service, veterans' medical program, service on draft boards, deferment of medical students, enrollment of physicians in the armed forces, care of the civilian population in emergencies, medical legislation, and hospital and medical care insurance.

Possibly one of the most controversial issues before the House was the proposed amalgamation of Blue Cross-Blue Shield on a national level and formation of a national insurance company. On the second morning of the session, which was given over to committee meetings, the reference committee handling this particular subject had between 300 and 400 persons present during most of the three and a half hour session. When the report was given to the House, it recommended that the House disapprove of the national insurance company but that it approve formation of a national enrollment agency and further development of coordination and reciprocity among the local plans. The House approved of this recommendation and also one that Associated Medical Care Plans make necessary changes in its constitution and by-laws to take it out of the policy making field. The House also reaffirmed

*J.A.M.A. 138:436 (Oct. 9) 1948.

its desire for the promotion and extension of the voluntary prepayment medical care plan movement.

The second most-discussed problem was probably that of A.M.A. participation in socio-political issues. Several resolutions calling for definite action by the A.M.A. and attendant financing through a special assessment were introduced, and on the final afternoon of the meeting the House voted to assess each member \$25 to carry on a nationwide plan of education on the progress of American medicine.

Dr. W. L. Pressley of Due West, S. C. was voted the General Practitioner for 1949, and Father Alphonse Schwitalla was given the layman award for outstanding effort for the public welfare on a national level.

The work of the House was handled very expeditiously, and the reports of the reference committees on the last afternoon were indicative of the time and effort that had gone into their consideration. For the most part they were accepted without question, since time had been given during committee hearings for all interested persons to appear. No changes in policy were made; for the most part, an extension and increased attention were urged for the many activities of the Association.

Report on Annual Conference of Secretaries and Editors

An undercurrent feeling that "the time is now" to act on the important problems facing the medical profession marked the Annual Conference of Secretaries and Editors held in St. Louis November 28 and 29. Foremost among the problems discussed and upon which action was recommended were medical legislation, the relationship of osteopathy to medicine, medical and hospital care prepayment plans, and medical care of the nation in the event of another war.

Dr. Edward J. McCormick of Toledo, Ohio, a member of the Board of Trustees of the American Medical Association, minced no words in emphasizing that there must be closer cooperation between the state and county medical societies and the American Medical Association in matters of medical legislation. Editors must realize that when they depreciate the A. M. A., they play into the hands of opponents, he warned. The place to decide differences is in the House of Delegates and committee meetings, not the printed organ, for "one cannot criticize father or mother or perceptor and not have the chickens come home to roost."

Dr. McCormick pointed out that those who speak for medicine should be prepared; they must not become confused by statements that do not reflect the thoughts of the American Medical Association, of whom the House of Delegates is the only body qualified to speak. The time has come for clearing all writings representative of American medicine through one center, particularly if there is any doubt concerning the veracity of the material. Dr. McCormick made the following recommendations for carrying out these objectives:

1. There should be integrated and daily coordination between the American Medical Association and state societies on all policies.

2. The Washington office of the A. M. A. should have all possible data from state associations on all members of Congress.

3. State associations must be in constant contact with their congressmen by telephone, mail and wire.

4. The Washington office should be so staffed as to be able to advise state associations at once if their representatives are acting other than in conformity with the principles of American democracy.

5. Bulletins issued by any department of the A. M. A. should carry A. M. A. approval or disapproval of policies under consideration.

6. Delay should be avoided in the adoption of bills by state associations.

7. A. M. A. publicity and public relations departments should advise people when the association is for as well as against a bill.

8. A. M. A. relations with state societies should be cemented, and advice should come from that organization rather than an outside group.

9. The A. M. A. should not be reluctant to introduce legislation.

10. Competent physicians from all regions should testify before legislative committees. Lists should be enumerated giving reasons why the A. M. A. is for or against a bill.

11. Every effort should be used at county medical society levels to enlist aid of local citizens in promoting medical policies.

12. The approach in all matters of health education should be constructive.

13. The A. M. A. should have available a list of capable speakers on health legislation. Public debates should be discouraged unless the speaker can defend the subject.

14. Labor and similar groups should be contacted, and the far-reaching effects of regimented medicine discussed with them.

15. No state or county medical society should

attempt to answer national problems without A. M. A. advice.

16. Physicians throughout the country should be educated to promote medicine for democracy. "Every doctor should get in there and pitch instead of only nine old men on the Board of Trustees."

Discussing medical legislation from the state level, Dr. Dwight H. Murray of Napa, Calif., pointed out direct means for helping candidates of choice secure office. Much of this must be done on the county level—canvassing the field for good men to fill office; helping them in the primary election race through collecting funds, getting out the vote, etc.; letting the candidate know you are supporting him; getting out the vote, perhaps with the aid of the Woman's Auxiliary, on final election day; helping him after election, particularly by providing the best medical care available; and keeping him properly informed on medical legislation. A strong public relations set-up at both state and county levels is of equal importance with one on the national level.

Representative Forest A. Harness of Indiana told the group that the medical profession must fight more practically and effectively if it is to preserve its right to maintain free practice. The medical profession is being criticized for lack of expansion of the training program, the lack of hospital and nursing facilities, and the lack of doctors in rural areas, he said. Unless doctors find solutions on state and local levels, the problems will be thrown to a medical bureaucracy. Doctors must become practicing politicians if they are to maintain free practice, Congressman Harness believes.

Osteopathy's relationship to medicine was discussed by Dr. William H. Halley of Denver, Colo., Dr. George W. Covey of Lincoln, Neb., and Dr. Creighton Barker of New Haven, Conn. Viewpoints expressed distinctly emphasized the difference in attitudes in various sections of the country as well as the relative importance of the problem in each vicinity. Dr. Halley pointed out that in Colorado friendly relationships exist and the two groups have cooperated in legislative and sociologic matters for some ten years; there is not professional cooperation, however. Doctors of that state are wondering if it is time to consider amalgamation, or perhaps a mutual working agreement with cooperation in joint legislation and similar matters.

In Nebraska there is separate licensing of doctors of medicine, osteopathy and chiropractic with basic science requirements first being met. What is covered in the field of osteopathy is definitely

defined in the laws; each is required to have his license displayed and a sign at least one inch in height carrying his professional degree.

In Connecticut there are only 77 osteopaths to 3,000 doctors of medicine, Dr. Barker stated. Osteopaths are not considered as practicing medicine, but rather—a quaint therapeutic method, and they may practice osteopathy as such but not medicine and surgery. The medical profession's attitude toward osteopathy is upheld not as a narrow self-protection measure but rather as a protection of the public.

Mr. Alfred J. Jackson, Director of the Cooperative Medical Advertising Bureau, reported that advertising income for the state journals has been "some less" in 1948 and would probably remain on approximately that level in 1949.

The Sunday afternoon sessions consisted of round-table conferences on three subjects: "Medical Society Radio Programs," "Medical-Hospital Prepayment Plans," and "Medical Legislation." Suggestions derived from the radio panel were that the straight lecture is of little value unless particularly well done; that in the interview type program the interviewer should merely interject remarks or questions, leaving the actual instruction to the doctor; that it is valuable to get a viewpoint inserted into someone else's program; and that care should be taken to slant and color copy infringing on Federal Communications Commission restrictions. Points discussed on the other two subjects were reiterations of views expressed in speeches given earlier in the conference.

Dr. Paul R. Hawley, Chief Executive Officer, Blue Shield-Blue Cross Commission, discussed "Medical and Hospital Care Prepayment Plans" in the opening address Monday morning. Dr. Hawley pointed out that he believes the need for prepaid medical care plans is the outgrowth of development of the American way of life. The nonprofit plans are less expensive and return a higher percentage of the dollars invested, but their one great weakness is that no machinery for dealing with large national accounts exists. This problem must be decided by the House of Delegates if nonprofit plans are to successfully compete with commercial companies. Dr. Hawley feels that to date the general pattern of private practice has met all requirements for medical care and that when it no longer meets these requirements it will be met by evolution of the profession itself. He stated that he felt Blue Shield should be locally sponsored and controlled but that it must have a national agency which would be able to underwrite the differences that now exist.

SPEAKERS BUREAU

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SUMMARY OF 1948 ACTIVITIES

The many and varied activities of the Speakers Bureau increased somewhat during 1948. Cancer institutes, postgraduate courses, pediatric and obstetric institutes, and county society and lay meetings were all planned and carried out by this office in addition to the regular schedule of radio work.

The main project of the Speakers Bureau this last year was the cancer institutes which were held in Iowa during the month of October. Seven of these institutes were presented in Cedar Rapids, Sheldon, Davenport, Red Oak, Waterloo, Creston and Washington. These were made possible by the Cancer Division of the State Department of Health and the Iowa Division of the American Cancer Society. A total of 27 lectures were given by prominent specialists from Rochester, Chicago, Omaha, Kansas City, and other cities, and also by members of the State Society.

The total attendance at these institutes was 423 or an average of 60 doctors at each meeting. The programs, which stressed early recognition and diagnosis of cancer, were particularly worth-while this year, and many favorable comments were made regarding both the institutes and the fine speakers. In summary, it can be said that these are now out of the experimental stages and have proven more than successful; so much so, in fact, that a series of heart and chest institutes set up along the same lines will be presented this spring.

During the months of March, April and May, postgraduate courses were presented in Burlington and Creston consisting of three and five lectures respectively. In November and December, another course was given in Carroll which also consisted of five lectures. These courses featured discussions by well-known men on diabetes, obstetrics, heart and many other pertinent subjects of interest to the general practitioner. These postgraduate courses have all made definite contributions to the advancement of modern medicine in Iowa.

Successful pediatric and obstetric institutes, financed by the Committee on Maternal and Child Health and by the State Department of Health, were presented in two centers last year. One was held in March at Fort Dodge and the other in May in Sioux City, and both featured two lectures on pediatrics and two on obstetrics.

The radio work was carried on in much the same vein as previously with the additions of dramatizations of venereal disease cases. A special effort was

made to contact the newer members of the society to write the material so that they might be indoctrinated into its activities. Approximately 2,700 copies of radio talks were mailed to listeners in Iowa, Missouri, Illinois, the Dakotas and surrounding mid-western states.

County medical societies availed themselves of Speakers Bureau services twelve times during the past year. The largest project was the summer meeting of the Upper Des Moines Valley Medical Society which presented five lectures on August 12 by prominent Iowa and Minnesota doctors. The Bureau furnished both speakers and movies to the remaining counties.

The Speakers Bureau also furnished speakers and movies nine times to the Parent-Teacher Association, women's clubs, Kiwanis Club and other lay groups.

PLANS FOR 1949

During the coming year the Speakers Bureau will continue its educational efforts and services to the State Medical Society, and we hope that they will be on an even larger scale than previously. The reactivation of county medical societies has been a slow process since the war, but they are gradually coming to participate more and more in these educational programs. Already we have three postgraduate courses tentatively scheduled, and three heart and chest institutes, along the same lines as the cancer institutes, will definitely take place this spring.

The need to become familiar with the new technical advances in medicine is ever present, and as these postgraduate courses and institutes are the largest contribution the Bureau can make in its educational program, plan to take advantage of them. Watch this JOURNAL page and check the announcements mailed to you for the definite details.

WEBSTER COUNTY POSTGRADUATE COURSE

The first postgraduate course of 1949 will be held in Fort Dodge during the months of January, February and March. These lectures will be held every two weeks. The first talk on January 27 will be on the recent advances in the treatment of common ear, nose and throat conditions as seen by the general practitioner. The second discussion on February 10 will cover the medical and surgical aspects of gall-bladder disease; on February 24, the lecture will be on the anemias of pregnancy. On March 10, a talk will be given on tuberculosis, and the final symposium

(Continued on page 31)

NEWS NOTES

from the

Committee on Medical Service and Public Relations

First National Public Relations Conference

The First National Public Relations Conference, sponsored by the American Medical Association, was held Nov. 27, 1948 in St. Louis, Mo. The conference opened with a luncheon at 12 o'clock noon in the Missouri room of the Hotel Statler. There was a total of 240 physicians and public relations people registered for the Public Relations Conference.

Dr. George F. Lull of Chicago, Secretary and General Manager of the American Medical Association, gave the welcome address and presided over the meeting. Dr. Lull expressed the definite need for better medical public relations and encouraged the doctors to do more spade work at the local community level. He indicated the need for the entire profession to keep informed on all current events, both scientific and social, and to give an expression of opinion when the opportunity presents itself. At the conclusion of these opening remarks, Dr. Lull introduced the public relations staff of the A.M.A.

Mr. Lawrence W. Rember of Chicago, Executive Assistant, A.M.A., gave conference observations. He stated that the establishment of the Public Relations Department of the A.M.A. proved the association is doing everything possible to improve public relations both on the national and local level. He extended a vote of thanks to all state societies for the excellent cooperation they have given to the department. He is of the opinion that an exchange of ideas on public relations within the forty-eight states will make for a better nationwide program. He outlined the following as being necessary to improving medical relations:

1. Advancement of prepaid medical care plans.
2. Adequate medical service on a twenty-four hour basis.
3. Improved medical care in the rural areas.
4. Development of good press relations.
5. Education of the public on medical advancement.

He closed his discussion by stating, "The Public Relations office of the American Medical Association

stands ready to assist any and all states in their public relations programs."

Mr. Rember was followed on the program by Dr. Claude Robinson, Princeton, N. J., President of the Opinion Research Corporation, who spoke on the subject, "The Public Speaks on Health."

Dr. Robinson pointed out that the recent failure of the pollsters to predict the outcome of the presidential election has changed their thinking to a more realistic approach. More time must be spent measuring sentiment rather than opinions, and a proper analysis of the number who respond to an appeal must be made. He pointed out that even though people may have stated they were voting for a particular candidate there was no assurance that this was carried out when they were in the voting booth. He is of the opinion that many people were undecided as to how they should cast their ballot, and as a result it was very difficult to secure an accurate measurement of public opinion. He stated that postulates have changed, and as an example he pointed out that a low total vote ordinarily indicated a high Republican vote. Of course, we all know this was not true in the recent election. He believes the best way to measure public sentiment is to contact the public at the street-corner level. He is of the opinion that it is the responsibility of the medical profession to create an environment that can represent only the private practice of medicine. Dr. Robinson stated winning public favor is excellent but more important is holding public favor.

He indicated that if doctors do not organize and get behind their voluntary prepaid plans Uncle Sam will do the organizing for them and present them with a compulsory health program. He believes the doctor should take great care in formulating an organization so as not to spend time developing unnecessary programs that will be of no value in combating the threats that are now confronting the medical profession. He pointed out that since the United States has the finest medical care and the most healthy population in the world the doctors have the right to resist any type of government encroachment. Dr.

Robinson stated that 75 per cent of the people need an easier way to pay for medical care, and he believes these voluntary prepaid plans, sponsored by the medical profession as well as the high type commercial companies, can solve this problem without government intervention. Poll experience indicates that approximately one-third of the total population favors government medicine. Dr. Robinson suggested the following public relations technics to expand and improve state programs:

1. Keep the doctors informed and solicit their assistance.
2. Develop discussion of subjects from ends to means rather than from means to ends.
3. Discuss the sale of prepaid insurance.
4. Disseminate information from the Brookings Institute.
5. Encourage closer examination of the organization of medicine.
6. Make the profession and public aware of the cost of a socialized medical program and give a calm explanation of the involvements in a social program.

In closing, Dr. Robinson said, "Physicians should be the keystone to the development of public thinking."

The morning session was adjourned following Dr. Robinson's discussion.

Dr. John F. Conlon, Boston, Chairman, Director, Medical Information and Education, Massachusetts Medical Society, called the afternoon session to order at 2:30 p. m. He acted as chairman of the Public Relations Problem Clinic which included discussions by six authorities on the various phases of public relations in the profession.

Lester H. Perry, Harrisburg, Executive Secretary, Medical Society of the State of Pennsylvania, was the first discussant and his subject was "Selling the Need for Public Relations to the Profession." Top management of each individual state society must be sold on the necessity for public relations, including the Board of Trustees and Executive Council. After these persons are convinced of a need of public relations, it must then be carried to the profession in general, Mr. Perry said. He suggested the following technics to be used in discussing with the profession a need for public relations:

1. Discover the public relations problems.
2. Design programs to solve problems.
3. Make the programs workable.

He referred to the state of Colorado as having an ideal public relations program. Once the profession is sold on public relations, then all means

of communication should be utilized — speech, written word, visualization. Mr. Perry believes personal appearance is the most important of the three suggested technics. He believes the public relations person should sell his or her ideas or projects to the profession, outline the cost that may be involved and attempt to procure doctor participation in the program.

Dr. Charles G. Hayden, Boston, Medical Director, Massachusetts Medical Service, was next on the program with a discussion of public relations to aid medical prepayment plans. Dr. Hayden is of the opinion that the problem is more one of intra-professional relations than public relations. If the profession is completely sold on voluntary prepaid medicine care plans, he feels it will in turn convince the public of their value. Dr. Hayden outlined the operating procedures of the Massachusetts Medical Service which are very similar to those in Iowa.

Mr. Theodore Wiprud, Washington, D. C., Executive Director and Secretary, Medical Society of the District of Columbia, talked on handling emergency and night calls. Mr. Wiprud explained the operation of the medical bureau twenty-four hour telephone secretarial service which has been in operation eight years in the District of Columbia and now has 600 participating physicians. The main functions of this medical bureau are to:

1. Locate doctors who are members of the bureau.
2. Provide reliable information about physicians, medical facilities and institutions.
3. Handle emergency calls for individuals who do not have their own physicians.

He believes a service of this type is important in the more metropolitan areas.

The fourth discussant was Mr. C. H. Crownhart, Madison, Secretary, State Medical Society of Wisconsin, who discussed cooperating with special publics. Mr. Crownhart said that public relations is certainly not new to the profession, but that prevailing circumstances have made it necessary for state societies to develop more comprehensive public relations programs. He believes the medical profession must afford health protection, but the public is responsible for giving the doctors every opportunity to protect it. He pointed out that special public is not one particular device but is the whole of the American people. He believes that the public in general is prejudiced against the profession but through proper cooperation from the newspaper, radio, labor, industry and other such organizations, this feeling can be eliminated. He is also of the belief that concern

should surround intra-professional relations as well as public relations.

Henry S. Johnson, Richmond, Director, Public Relations and Medical Service, Medical Society of Virginia, spoke on "Cooperating with Health Agencies." He is of the opinion that state and local health conferences are necessary in furthering the relations between medical and health organizations. The office of public relations of the state societies can assist this effort a great deal by using the services available in radio, press and public forums to obtain closer working programs. Each county medical society and Woman's Auxiliary also has its part in the operation of health agencies. Mr. Johnson also stressed the need for improved doctor-patient relations.

Clem Whitaker, San Francisco, Public Relations Counsel, California Medical Association, spoke on the subject, "Medical Public Relations and the Government." Mr. Whitaker outlined the plan of operation utilized by the California association to combat the forces of Governor Earl Warren. He stated that extensive and expensive radio, newspaper and public appearance programs were used. In January of 1945, the dues of the members of the Medical Society of California were increased to \$100 per year for a duration of three years at which time the annual dues were to be reduced 50 per cent. Mr. Whitaker pointed out that this notable increase was necessary to enable the society to accumulate sufficient funds to combat the forces proposing state medicine. He also pointed out that contributions were made by industries and lay organizations to assist in the fight. He believes that if a poll were taken at the present time in the state of California

questioning a program of socialized medicine, well over 50 per cent of the state would vote against this proposal. This victory was definitely significant in view of the fact that Governor Warren had never previously been defeated in any of his proposed programs. Mr. Whitaker feels that a similar program might be adopted on the national level to combat the government's attempted encroachment.

A question and answer period followed the presentation of these six medical relations' targets. Following this period, the conference was adjourned.

Donald L. Taylor

SPEAKERS BUREAU

(Continued from page 28)

sium will be on March 23 when the diagnosis and treatment of peptic ulcer will be discussed both from a medical and a psychiatric angle.

These will be dinner meetings, and more detailed data in regard to the speakers, meeting place and starting time will be mailed to doctors in Fort Dodge and the surrounding area at a later time. However, note the dates given above on your calendar now and plan to attend. The fees will be nominal.

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Tuesday at 11:30 a. m.

WOI—Thursday at 11:15 a. m.

- Jan. 4- 6 Nurse Recruitment
Iowa State Nurses Association
- Jan. 11-13 The Common Cold and Influenza
John R. Beebe, Mount Pleasant
- Jan. 18-20 Pneumonia
J. F. Lawlor, M.D., Cherokee
- Jan. 25-27 Insomnia
Norman D. Render, M.D., Clarinda

MORBIDITY REPORT

DISEASE	Nov. '48	Oct. '48	Nov. '47	Most Cases Reported from:
Diphtheria	6	6	16	Scattered
Scarlet Fever	89	56	152	Black Hawk, Dubuque, Polk
Typhoid Fever	1	3	1	Page
Smallpox	0	0	0	
Measles	73	17	58	Cerro Gordo, Dubuque
Whooping Cough	21	75	79	Floyd, Washington, Woodbury
Brucellosis	19	39	67	Cass, Polk
Chickenpox	408	103	204	Dubuque, Linn, Montgomery
German Measles	0	1	9	
Influenza	0	0	4	
Malaria	0	0	0	
Meningitis	0	8	6	
Mumps	215	104	82	Boone, Dubuque, Scott, Story
Pneumonia	12	7	4	Black Hawk, Polk
Poliomyelitis	134	361	18	Cerro Gordo, Clinton, Polk
Tuberculosis	60	55	58	For the State
Gonorrhea	75	95	113	For the State
Syphilis	112	124	355	For the State

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 James B. Knipe.....Armstrong
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 Edward F. Beeh.....Fort Dodge
 James C. Hill.....Newton
 Harold A. Housholder.....Winthrop
 Clyde A. Boice.....Washington
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THE JOURNAL

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Daniel R. Webb.....	Cedar Rapids

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

- A.M.A. INTERNS' MANUAL**—W. B. Saunders Co., Philadelphia, 1948. Price, \$2.25.
- HUMAN BIOCHEMISTRY**—By Isreal S. Kleiner, Ph.D., Professor of Biochemistry and Director of the Department of Physiology and Biochemistry, New York Medical College, Flower and Fifth Avenue Hospitals; Formerly Associate, The Rockefeller Institute for Medical Research, New York. Second Edition. The C. V. Mosby Company, St. Louis, 1948. Price, \$7.00.
- CLINICAL MANAGEMENT OF VARICOSE VEINS**—By David Woolfolk Barrow, M.D., Lexington, Ky. Foreword by ARTHUR W. ALLEN, M.D., Boston, Mass. Paul B. Hoeber, Inc. Medical book department of Harper & Bros., New York, 1948. Price, \$5.00.
- CONTROL OF PAIN IN CHILDBIRTH**—By Clifford B. Lull, M.D., F.A.C.S., F.I.C.S., Director, Division of Obstetrics and Gynecology, Philadelphia Lying-in-Unit, Pennsylvania Hospital; and ROBERT A. HINGSON, M.D., F.I.C.S., F.A.C.A., Associate Professor of Obstetrics; Anesthesiologist, Department of Obstetrics, John Hopkins University and Hospital; Surgeon, U. S. Public Health Service. Introduction by NORRIS W. VAUX, M.D., Consulting Obstetrician and Gynecologist, Philadelphia Lying-in-Unit of Pennsylvania Hospital; Professor Emeritus of Obstetrics, Jefferson Memorial College. Third Edition, revised and enlarged. J. B. Lippincott Co., November, 1948. Price, \$12.00.
- DIABETIC MANUAL FOR THE DOCTOR AND PATIENT**—By Elliott P. Joslin, M.D., Sc.D., Clinical Professor of Medicine, Emeritus, Harvard Medical School; Medical Director, George F. Baker Clinic at New England Deaconess Hospital; Consulting Physician, Boston City Hospital, Boston, Mass. Eighth Edition. Lea & Febiger, Philadelphia, 1948. Price, \$2.50.
- OCCUPATIONAL THERAPY SOURCE BOOK**—Edited by Sidney Licht, M.D. With an introduction by C. Charles Burlingame, M.D., Psychiatrist-in-Chief, The Institute of Living. The Williams and Wilkins Company, Baltimore, 1948.
- PATHOLOGY**—Edited by W. A. D. Anderson, M.A., M.D., F.A.C.P., Professor of Pathology and Bacteriology, Marquette University School of Medicine, Milwaukee, Wis. The C. V. Mosby Co., St. Louis, 1948. Price, \$15.00.
- PEDIATRICS AND THE EMOTIONAL NEEDS OF THE CHILD**—As discussed by pediatricians and psychiatrists at Hershey, Pennsylvania, March 6-8, 1947. Edited by Helen L. Wittmer. The Commonwealth Fund, New York, 1948. Price, \$1.50.
- PSYCHIATRY IN GENERAL PRACTICE**—By Melvin W. Thorner, M.S., Assistant Professor of Neurology, The Graduate School of Medicine, University of Pennsylvania. W. B. Saunders Company, Philadelphia, 1948. Price, \$8.00.
- PHYSICIAN'S HANDBOOK**—By John Warkentin, Ph.D., M.D., and JACK D. LANGE, M.S., M.D., Fifth Edition. University Medical Publishers, Palo Alto, California. Price, \$2.00.
- THE 1948 YEAR BOOK OF GENERAL MEDICINE**—Edited by Paul B. Beeson, M.D., J. Burns Amberson, M.D., George R. Minot, M.D., S.D., F.R.C.P. (Edinburgh and London), William B. Castle, M.D., S.M., M.D. (Hon.) Utrecht, Tinsley R. Harrison, M.D., and George B. Eusterman, M.D. The Year Book Publishers Inc., Chicago. Price, \$4.50.
- THE 1948 YEAR BOOK OF PEDIATRICS**—Edited by Henry G. Poncher, M.D., Professor and Head, Department of Pediatrics, University of Illinois College of Medicine, Chicago. Isaac A. Abt, M.D., Editor Emeritus. The Year Book Publishers Inc., Chicago. Price, \$4.50.
- VIRUS DISEASES OF MAN**—By C. E. van Rooyen, M.D., D.Sc. (Edin.), M.R.C.P. (Lond.), Research Member and Professor of Virus Infections, Connaught Medical Research Laboratories and School of Hygiene, University of Toronto, Formerly Sir Halley Stewart Research Fellow, and Lecturer in Bacteriology, University of Edinburgh, and London School of Hygiene and Tropical Medicine, University of London. Thomas Nelson and Sons, New York, 1948. Price, \$20.00.

BOOK REVIEWS

THE ACUTE BACTERIAL DISEASES

Their Diagnosis and Treatment

By Harry F. Dowling, M.D., F.A.C.P., Clinical Professor of Medicine, George Washington University; Chief, George Washington Medical Division, Gallinger Municipal Hospital; with the collaboration of LEWIS K. SWEET, M.D., Chief Medical Officer in Pediatrics and Infectious Diseases, Gallinger Municipal Hospital; Adjunct Clinical Professor of Pediatrics, George Washington and Georgetown Universities; and HAROLD L. HIRSH, M.D., Assistant Professor of Medicine, Georgetown University; Director of the Bacteriology and Immunology Laboratory, Georgetown University Hospital. W. B. Saunders Company, Philadelphia, 1948. Price, \$6.50.

This timely text presents new concepts of diagnosis and treatment which have arisen in the few years since the introduction of sulfanilamides, penicillin, and streptomycin. The book acts as a practical guide in the use of chemotherapy and the antibiotics.

The scope of the book is evident by a listing of its parts: (1) Diagnosis and Treatment of Acute Bacterial Disease, (2) Diseases Caused by Cocci, (3) Diseases Caused by Bacilli, (4) Bacterial Disease in Which Exotoxins are a Major Factor.

The book reflects the author's long experience in the field of acute bacterial disease. The style is readable. Frequent diagrams are most helpful. The type and physical make up of the book are excellent.

J. N. Mc.

HANDBOOK OF ORTHOPAEDIC SURGERY

By Alfred Rives Shands, Jr., B.A., M.D., Medical Director of the Alfred I. duPont Institute of the Nemours Foundation, Wilmington, Del. Visiting Professor of Orthopaedic Surgery, University of Pennsylvania School of Medicine, Philadelphia, Pa. In collaboration with RICHARD BEVERLY RANEY, B.A., M.D., Associate in Orthopaedic Surgery, Duke University School of Medicine, Durham, N. C.; Lecturer in Orthopaedic Surgery, University of North Carolina

School of Medicine, Chapel Hill, N. C. Third Edition. The C. V. Mosby Company, St. Louis, 1948.

In the third edition of his handbook, Dr. Shands has added newer developments in the treatment of orthopedic conditions. As a handbook, it is without question invaluable to any student of orthopedic surgery. The various aspects of orthopedic surgery are succinctly presented with excellent illustrations. There is no better source of information applicable to all branches of the specialty.

E. M. G.

MEDULLARY NAILING OF KÜNTSCHER

By Lorenz Böhler, M.D., Director of the Hospital for Accidents in Vienna; Professor of Surgery at the University of Vienna. First English edition revised by the author. Translated from the eleventh German edition by HANS TRETTER, M.D., Surgeon in Charge of the New Jersey Manufacturers Hospital, Active Consultant in Traumatic Surgery at the Orthopaedic Hospital, Trenton, N. J.; former Assistant to Dr. Böhler at the Hospital for Accidents in Vienna; former Demonstrator of Anatomy, University of Graz, Austria. The Williams and Wilkins Company, 1948. Price, \$7.00.

This volume is the first English edition translated from the eleventh German edition of Böhler's work on fractures and deals exclusively with medullary nailing. This type of treatment is very completely discussed including the instrument needs, the indications for medullary nailing and the complications which ensue. The book is splendidly illustrated, and a thorough discussion is available for all types of fracture which are acceptable for this kind of treatment. This book should prove invaluable to anyone planning to use medullary nailing.

E. M. G.

OPERATIVE GYNECOLOGY

By Harry S. Crossen, M.D., Professor Emeritus of Clinical Gynecology, Washington University School of Medicine; Consulting Gynecologist to the Barnes Hospital, St. Louis Maternity Hospital, St. Luke's Hospital, de Paul Hospital and Jewish Hospital; and ROBERT J. CROSSEN, M.D., Assistant Professor of Clinical Gynecology and Obstetrics, Washington University School of Medicine; Assistant Gynecologist and Obstetrician to the Barnes Hospital and the St. Louis Maternity Hospital; Gynecologist to St. Luke's Hospital and de Paul Hospital. Sixth Edition. The C. V. Mosby Company, St. Louis, 1948. Price, \$15.00.

Crossen's *Operative Gynecology* has been one of the outstanding books of operative gynecology since 1915. The sixth edition has been completely revised and brought up to date. Special emphasis is placed

on treatment to prevent the future development of cancer of the female genital organs.

The authors discuss in detailed, step-by-step description several operations for the treatment of both the common and the unusual gynecologic conditions. Most of the technics described are well illustrated by drawings of all the important steps in the operation. The variety of pathology encountered in each disease is described and illustrated. Considerable space is devoted to the selection or modification of operative procedures to fit the variations of pathology one may find.

Chapters are included on the relationship of the urinary and intestinal tracts to gynecologic surgery. Other chapters cover the general principles of operative technic as well as preoperative and postoperative care. Problems of anesthesia and medico-legal aspects of gynecologic surgery are covered in separate sections.

Little can be said to add to the prestige this book has already attained. This volume, as were the previous editions, is an invaluable aid to anyone doing gynecologic surgery.

P. K. H.

PREOPERATIVE AND POSTOPERATIVE CARE OF SURGICAL PATIENTS

By Hugh C. Ilgenfritz, A.B., M.D., F.A.C.S., formerly Assistant Professor of Surgery, Louisiana State University School of Medicine, and Visiting Surgeon, Charity Hospital of Louisiana at New Orleans. Foreword by URBAN MAES, M.D., D.Sc., F.A.C.S., Emeritus Professor of Surgery, Louisiana State University School of Medicine; Consulting Surgeon, Charity Hospital of Louisiana at New Orleans; Consulting Surgeon, Touro Infirmary; Consulting Surgeon, Veterans Administration Hospital, New Orleans. The C. V. Mosby Company, St. Louis, 1948. Price, \$10.00.

Large scale emphasis on the diagnosis and pathology of surgical diseases and the stress laid on operative technique have tended to obscure the value of careful preoperative and postoperative care of patients to all except active surgeons. Many great advances have been made in this field in recent years.

This book reviews general surgical principles with these advances in mind. It is a concise and up to date summary of the pathological physiology that guides surgical practice. Included are chapters on fluid and electrolyte balance, metabolism and nutrition, shock and systemic diseases. The chapters on postoperative complications and antibiotic drugs are unusually instructive.

There is a fairly exhaustive study of each specialty with the exception of urologic, orthopedic and neurosurgery. This is an excellent manual for the general practitioner and the general surgeon.

T. F. T.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

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LINES FROM THE PRESIDENT

The inspiring holiday season is past; a new year is before us. May ours be a most happy and worthwhile new year, and may we all by concerted effort make the Auxiliary an asset to the medical profession of which we are so proud. Let us organize and work as we've never worked before to do our part in keeping the yoke of socialized medicine from being hung upon our husbands' profession.

It was my pleasure to drive to Ottumwa October 7 where I was a guest in the home of Dr. and Mrs. E. B. Howell. During my stay, Mrs. Howell and I drove to Centerville where the Appanoose County Auxiliary was organized, following a luncheon at which we were guests.

The same evening, I attended the regular meeting of the Wapello County Auxiliary at which two State Representatives were present. The points of the Murray Bill, S-2013, were reviewed and discussed. I appreciate very much the opportunity of meeting and becoming acquainted with the members of this very active auxiliary.

On Saturday, December 11, Mrs. Howard W. Smith, Woodward, and I were privileged to represent the Auxiliary at a conference called by the Iowa State Nurses Association to consider nursing problems. The nurse shortage was the most important single point which was reviewed as to "Causes," "Results of Shortage," and "What Can We Do About It?"

With sincere wishes for the best of new years,
Mary R. Felter, President

INFORMATION, PLEASE

Medicine and health issues will not take a back seat when the 81st Congress convenes. A mere glance at the "Unfinished Business," without any consideration of "New Business," is conclusive proof that doctors and their wives need to do some serious studying and thinking in order to discuss these issues calmly and intelligently. They must not be carried away by emotion or anger when deliberating with laymen, but should be adequately equipped with facts for and against medical bills with special emphasis on compulsory insurance.

At the A.M.A. meeting in St. Louis it was disclosed that there are 50 or more organizations "needling" for compulsory health insurance. It seems the part of wisdom, then, that voluntary insurance plans be expanded as quickly as possible

and reciprocal agreements developed. Some news commentators spent as long as 10 minutes of their 15 minute reviews discussing the fact that the trustees of the A.M.A. expected to assess each member \$25.00 to provide funds for an expansion of the Washington office and an intense educational program.

The Washington office of the A.M.A. recommends that Congressmen be familiar with voluntary insurance plans and the hospital construction program in their communities as well as with the local methods of providing medical care for veterans. There will be approximately 20 per cent new members in both Houses. Public leaders in the profession or out, when sufficiently informed, can do much toward moulding opinion. Senators and Representatives who are invited to attend county or state medical meetings will undoubtedly contribute as well as acquire new viewpoints.

January is the month when many Auxiliaries begin program planning for the new year. We refer program chairmen to the excellent list of current material on compulsory insurance which was published in the December issue of "The Woman's Auxiliary News" and which is available from Mrs. Cecil C. Jones, 3303 Lincoln Place Drive, Des Moines, Iowa.

We recommend the following articles which have appeared in magazines which are readily available: "National Health Legislation," by Senator Joseph H. Ball in *Hygeia*, September 1948; "Will Compulsory Insurance Help Keep You Healthy? Yes," by Albert Deutsch, and "Will Compulsory Insurance Help Keep You Healthy? No," by Greer Williams in *Better Homes and Gardens*, September 1948.

Mrs. K. M. Chapler

UNFINISHED BUSINESS

Medical Issues in the 81st Congress

The Hoover Commission: A Commission on Organization of the Executive Branch of the Government was established by Public Law No. 162, 80th Congress, to promote economy, efficiency and improved service in the transaction of the public business in the various agencies and bureaus of the executive branch. The report of this Commission, to be submitted to the 81st Congress by Jan. 13, 1949, will undoubtedly recommend the elimination of some government health activities and the consolidation of others. It will also comment

on the creation of a department or secretariat of health.

Advisory Council on Social Security to the Senate Committee on Finance: This Council, created by S. Res. 141, was directed to make a full and complete investigation of social security with special reference to coverage, benefits and taxes. Report is being submitted in sections. Three sections have been published thus far. It recommends that the government increase its interest in extending social security coverage, financial aid to those suffering total disability and aid to dependent children.

The Smith Committee: S. Res. 249 authorized the Subcommittee on Health of the Committee on Labor and Public Welfare of the Senate to continue its study of national health problems and of the relevant legislative proposals. It is to report to the full Committee on Labor and Public Welfare by March 15, 1949. The results achieved through grants-in-aid and other forms of subsidy are receiving special attention.

National Health Bill: A new health insurance bill is certain to be drafted along the lines adopted by the Federal Security Administrator in his report to the President on the National Health Assembly. His report, the Administrator admits, will not necessarily accord with the report to be submitted by the Executive Committee of the Assembly. An interested visitor to all sections of the Assembly, while they were in action, found a majority supporting the proposition that a health program to be most efficient must function on a community rather than on a national basis. Other bills will be introduced as suggested by the recommendations that the President may make in his message to the Congress.

Draft: The Department of Defense is confronted with a very acute problem in providing adequate care for the draftees whom it will collect during the next year. It was hoped that a sufficient number of physicians would volunteer for this service. If an adequate number cannot be secured in any other way, the Department of Defense may be obliged to propose a draft bill.

Various plans for deferring medical students from the draft are being considered. The wisdom of permitting students who are pursuing a medical education to continue without interruption is obvious, but there are also students engaged in other scientific fields whose importance cannot be overlooked. Where to draw the line between the essential and non-essential is a problem.

Medical Examination of Children of School Age: When the 80th Congress adjourned it was considering bills (S. 1290 and H.R. 1980—School Health Act) authorizing the states to set up programs for the medical examination of school children or children of school age. Hearings were held on the bills, but the committees did not take action. It can be expected that the subject will be continued by the next Congress. The American Parent Committee, promoter of one of the bills, will hold two one-

day conferences this month, one in Washington and the other in New York City, to preview legislation for children in the 81st Congress.

Disability: Temporary or partial disability: One section of the National Health Program (S. 1734 and H.R. 4390) before the 80th Congress provided for the payment of cash benefits to workers for the time that they might be unemployed because of illness. Three states (Rhode Island, California and New Jersey) now have insurance laws of this character.

Permanent and total disability: Two bills (S. 1679 and H.R. 4303) outlined a program of benefits for persons totally disabled. The Senate Advisory Council (see above) recommends that legislation be considered in this field.

Veterans: Two outstanding problems present themselves for solution in providing medical care for veterans.

(1) Hospitalization. The Veterans Administration has authority under Public Law No. 346, 78th Congress, to build an adequate number of hospitals. As presently visualized, there will ultimately be approximately 300,000 beds at a cost of upwards of one billion dollars. This building program is being developed as rapidly as possible although the Veterans Administration reports that it now has more beds available than it can staff with doctors and nurses, and there are also reports to the effect that many operating hospitals have proportionately few service-connected patients. An unexpected and undesirable competition arises between the Administration's hospital building program and the development of the Hill-Burton Act. In some instances the two construction plans are operating in the same community.

(2) The other problem that is likely to engage the attention of the Congressmen is that of providing veterans with medical care for non-service-connected conditions. At present the unoccupied beds in veterans' hospitals can be made available to veterans suffering with non-service-connected conditions if they declare themselves financially unable to procure adequate care. Reports from the Veterans Administration show that more than three-fourths of the veterans cared for in veterans' general medical and surgical facilities are hospitalized for non-service-connected ailments. The government's decision as to whether it will provide all manner of medical care for the veterans or enforce the law with regard to indigency will very definitely influence the administration of the Hill-Burton Act.

Medical Indigent: The National Health Insurance Bill (S. 1520) proposed that the Federal Government assist the states in providing medical care for all those declared to be medical indigents. No satisfactory comprehensive definition of "medical indigent" has been developed. In the meantime the Senate Advisory Council on Social Security, mentioned above, is recommending increases in the amount to be allowed for medical care to certain categories of indigents, namely the recipients of

old age assistance, the blind, and dependent children.

Medical Education: Proposals have frequently been made to Congress that the number of medical schools should be increased, and the National Health Bill of last year carried a provision for this purpose. Senator Thomas (Utah), who may be the new chairman of the Committee on Labor and Public Welfare, introduced a bill at the close of the last Congress providing grants and scholarships for medical education. The Senator will very likely reintroduce his bill.

Public Health Units: Three bills authorizing the creation of a program of health units (S. 2189, H. R. 5644 and H.R. 5678) did not get beyond the hearing stage, and it can be expected that similar bills will be introduced early in the session.

Appropriations: The Bureau of the Budget has been holding hearings on the annual requests for funds made by the various agencies of the government. Their recommendations will be submitted by the President to the Congress early in January. Sizable requests are being made by the following agencies engaged in health activities: The Federal Security Agency, The Public Health Service, The National Institutes of Health, Bureau of Indian Affairs, Atomic Energy Commission, National Security Resources Board, Office of Civilian Defense Planning, Research and Development Board, and Children's Bureau.

Council on Medical Service, Washington Office,
Bulletin No. 24.

ANNUAL MEETING OF CANCER SOCIETY

The Iowa Division of the American Cancer Society held its second annual meeting at the Hotel Savery, Des Moines, November 21. In spite of inclement weather, the attendance was nearly 300, of whom 30 were nurses. It was a highly successful meeting, highlighted by an address by Dr. Charles S. Cameron of New York, director of the medical and scientific department of the American Cancer Society. He reviewed the past achievements and present trends, and he urged constant endeavor to further all efforts to alleviate and possibly stamp out cancer one day.

Of particular interest to Auxiliary members is the program of nurses' scholarships. We quote the requirements as summarized by E. L. C. White, executive director of the Iowa Division of the American Cancer Society and also chairman of the nurses' scholarships committee: "The committee recommended and the board of directors approved:

"1. The financing of advanced training for nurses to take special courses in cancer nursing. These would be short courses from six to eight weeks. The full eight months course, such as is offered at Columbia University, will be financed by the State Department of Health. Nurses who desire the short course should make application to the Iowa Division; those desiring the longer course will be referred to Dr. Edmund G. Zimmerer.

"2. Young women who desire to take nurses'

training will be required to sign notes guaranteed by two property owners. These notes are payable only if student nurse fails to complete her course unless failure is due to illness or death.

"3. Nurses' scholarships will be given by the Iowa Division on the basis of need, previous scholarship records, character, ability and possibly a competitive essay on "Why I Want to Be a Nurse." She must meet the standards set by the school she desires to enter, and her candidacy must be approved by the committee of the Iowa Division.

"4 Young women who are awarded these scholarships are required to take their training at some approved school of nursing in Iowa and to follow their profession for at least two years in the state.

"5. It is not the policy of the Iowa Division to give financial aid to students who have started training and haven't sufficient funds to continue, but the committee will advise these young women on how funds can be obtained.

"6. The committee has recommended and the board of directors has approved financial support of cancer institutes for nurses under the direction of the State Department of Health. The first such institute will be held March 21-23, 1949. Others will follow if the initial attempt appears successful. Dinners and notebooks will be provided by the Iowa Division."

ACTIVITIES OF COUNTY AUXILIARIES

Dubuque County

The Dubuque County Medical Auxiliary has agreed to hold monthly meetings. The doctors and their wives enjoyed a dinner party at Bunker Hill in May. During the summer a picnic was held at the home of Mrs. D. C. Conzett. In October the members met at Prairie Acre for a luncheon meeting. A dinner meeting was held at Kretz Cafeteria in November at which Miss Elvira Dolan, county secretary of the Society for Crippled Children, discussed the work of that organization.

Mrs. A. J. Entringer, president, announced the names of committee members for the year. Subscriptions to *Hygeia* was an emphasized project with stress laid on placing the magazine in dentists' as well as physicians' offices.

Mrs. Clarence Darrow

Wapello County

The Wapello County Medical Auxiliary entertained their husbands with a turkey dinner at the St. Joseph Nursing Home, November 14. There were 65 present. The fee of \$5.00 per couple will be collected from members who did not attend as well as those who were there and will be used for the fund with which the Auxiliary is sponsoring a nurse-in-training. There were talks on the Blue Cross and Blue Shield insurance plans, after which the group played cards.

The nurse recruitment committee is busy making contacts in small outlying communities in the hope of achieving fruitful results later on.

The Wagner-Murray-Dingell Bill will be discussed at the December 7 meeting. Our two representatives have been invited to attend.

Mrs. E. B. Howell

Delaware County

The Women's Auxiliary to the Delaware County Medical Society met with the doctors for dinner November 17, after which we had a separate meeting with all members but one present. After the business meeting in which we were assigned dentists to contact in regard to subscriptions of *Hygeia* magazine, we heard a fine report from Miss Mabel Olsen of Manchester, who has spent nine years as a missionary in Kentucky.

Mrs. B. H. Byers

PROGRAM SUGGESTIONS

A well thought out all-year program is essential. See to it that somewhere throughout the year you have left room or planned for a little fun. Remember one of the objectives of the Auxiliary is to help promote good fellowship among the medical profession and its families.

Stress attendance at all meetings, and while stressing this point Auxiliary members should do their best to urge the doctors to attend all their meetings.

Let us remember in setting up our programs that the main functions of a medical auxiliary are cooperation with the medical societies, acting as liaison between the medical profession and the public and giving special attention to those things which affect public health and public welfare.

Mrs. L. A. Coffin, Program Chairman

TWENTY-SIXTH ANNUAL MEETING

The twenty-sixth annual meeting of the Woman's Auxiliary to the American Medical Association will be held in Atlantic City, N. J., June 6-10, 1949, with headquarters at Hotel Haddon Hall. Hotel reservations can be made through the Committee on Hotels, Dr. Robert A. Bradley, chairman, 16 Central Pier, Atlantic City, N. J. It is suggested that you indicate that you are a member of the Woman's Auxiliary and would like to be housed at headquarters hotel, if that is your wish.

SPECIAL NOTES ON PROPOSED LEGISLATION

Representatives of the Iowa Interprofessional Association have met twice this fall to review legislation which will be introduced in the coming session of the legislature. The association is not organized for legislative purposes, but for the betterment of public health, and its interest in the proposed bills stems from the latter standpoint. The following bills have the approval of the association.

The Iowa State Nurses' Association's bill defines

the practice of nursing, provides for licensure, prohibits the practice of nursing by anyone not so licensed, provides for two classes of nurses—practical and registered, establishes educational requirements and standards for both classes, and in general strengthens the present nursing law. It will contain a waiver clause under which persons now claiming to be practical nurses can obtain a license without examination. This protects the many women in Iowa who have helped during the shortage of registered nurses by acting as practical nurses. Practical nurses will take a year's course of integrated study combining practice and theory. Registered nurses will take a three year course as at present, but the course will be rearranged somewhat so that if a girl has to drop out at the end of her first year she may take the examination for trained practical nurse and if she passes be licensed under that part of the law. Later if she wishes to continue her training, she may become a registered nurse by completion of the course originally started.

The bill has many good features and should encourage more persons to enter training. It protects the public by requiring that all persons nursing for hire shall be licensed (at present anyone can claim to be a practical nurse); it provides for licensure of girls who are forced to drop out of nursing school after a year's training (at present they have no standing); and it offers an opportunity for a career to girls who want to do bedside nursing, but lack the qualifications for a registered nurse.

The pharmacists have two bills: one to provide for licensing drug stores; the second, a drug and cosmetic act which has the backing of the food and drug department and other state officials. The first bill would tighten the present act, limiting the sale of drugs to registered pharmacists, providing definitions and standards of sanitation, cleanliness, etc., for drug stores, and in general elevating the standards of the pharmacists. The second bill is modeled on the Federal Food and Drug Act which is not effective in intra-state commerce. It would provide for a testing laboratory to which drugs made within the state may be submitted; it would enable the State Board of Pharmacy to make rulings and interpretations to guide persons affected by the act (something not possible under the federal law); it would eliminate the pressure from Washington to pass individual bills covering different drugs; and it would protect the public against inferior products not covered by the federal law. It would also define dangerous and habit-forming drugs and make personal prescribing of them mandatory.

The Iowa Hospital Association's bill proposes to remove the limit from the workmen's compensation law. Hospital costs have risen so greatly that the \$800 limit is no longer adequate, and when prolonged hospitalization is necessary, the hospital and doctor have to prorate the payment. Those present felt it was unfair for industry to expect the hospitals and doctors to carry their burden and approved of the principle and the bill.

SOCIETY PROCEEDINGS

MEETINGS

Butler County

The annual turkey dinner and meeting of the Butler County Medical Society and its Auxiliary were held November 8 in Allison. Following the dinner, Dr. Edward M. Mark was elected president of the medical society; Dr. Hugh G. MacLeod, vice-president; and Dr. Frank F. McKean, secretary-treasurer.

Calhoun County

Dr. William Bean, head of the Department of Internal Medicine at the University of Iowa, spoke on "The Treatment of Cardiac Decompensation" at the monthly dinner meeting of the Calhoun County Medical Society, held November 16 at the Brower Hotel in Rockwell City.

At the dinner meeting on December 16, Dr. Lyl J. O'Brien of Fort Dodge discussed diagnostic problems in surgery of the abdomen.

Carroll County

At a meeting of the Carroll County Medical Society, December 9, Dr. Vernard T. Lindsay was elected president; Dr. Roland B. Morrison, vice-president; and Dr. Leo H. Kuker, secretary-treasurer. On the scientific program were Dr. Kuker and Dr. Denvil F. Crowe who discussed "Gastric Carcinoma."

Delaware County

Preceded by dinner, the regular meeting of the Delaware County Medical Society and Auxiliary was held November 17 at the Glen-Charles Hotel in Manchester. Dr. Cecil W. Seibert of Waterloo was guest speaker for the medical group.

Greene County

The annual election of officers was held December 9 at the meeting of the Greene County Medical Society in Jefferson. A film on "Oxygen Therapy in Heart Disease" was shown.

Iowa and Illinois Central District Medical Association

At the dinner meeting of the Iowa and Illinois Central District Medical Association, held November 17 at the LeClaire Hotel in Moline, Ill., the featured speaker was Dr. Eric Oldberg, head of the Department of Neurology and Neurosurgery at the University of Illinois College of Medicine, Chicago. His topic was "Modern Management of Head Injuries." Also on the program was Dr. N. J. Katrana, East Moline, Ill., who addressed the group on "The Use of Radon Ointment and Detergents in Surgery."

Jones County

Dr. Robert D. Paul was elected president of the Jones County Medical Society at a meeting November 15 in Monticello. Dr. Robert Myers was named secretary; Dr. Henry F. Nolan, delegate; and Drs. Thomas M. Redmond, Earl H. Shaw and Morgan I. Nederhiser, censors. Representatives of Abbott Laboratories presented a series of films on recent medical advances.

Johnson County

The annual business meeting and dinner of the Johnson County Medical Society were held December 1 at the Jefferson Hotel in Iowa City. Dr. Robert T. Tidrick was elected president and Dr. Martin L. Mosher, Jr., vice-president. Dr. Robert C. Hardin was re-elected secretary-treasurer. The scientific program featured a clinicopathologic conference with guest speakers, Drs. Granville A. Bennett and LeRoy H. Sloan, from the University of Illinois School of Medicine, Chicago. Dr. Bennett presented the first case, discussed by Dr. Elmer L. DeGowin. The second case was presented by Dr. J. R. Carter, discussed by Dr. Sloan.

Lee County

The Lee County Medical Society, meeting December 15 in the Anthes Hotel in Fort Madison, was addressed by three Burlington physicians. Dr. George D. Jenkins discussed "Pyelitis of Pregnancy"; Dr. Carl J. Lohmann, "Early Ambulation After Surgery"; and Dr. Forrest H. Coulson, "Pulmonary Embolism." A dinner and round-table discussion followed the meeting.

Linn County

On January 13, Linn County Medical Society will hold its monthly meeting. Dr. R. L. Sanders of Memphis, Tenn., will speak on "The Peptic Ulcer Problem with Special Reference to Bilateral Vagal Resection." The discussion will be given by Dr. Frank R. Peterson of Cedar Rapids.

Marshall County

Newly elected officers of the Marshall County Medical Society are: Dr. Ralph C. Carpenter, president; Dr. D. Dale Harris, vice-president; and Dr. Harold E. Sauer, secretary-treasurer. Delegate is Dr. Otis D. Wolfe and alternate delegate, Dr. Earl L. Keyser.

Mississippi Valley Medical Society

Iowa doctors elected to office at a meeting of the Mississippi Valley Medical Society, held November

21 in Quincy, Ill., were Dr. Nathaniel G. Alcock of Iowa City, who was named president, and Dr. John I. Marker of Davenport, third vice-president.

Montgomery County

Dr. Helge Borre is the newly elected president of the Montgomery County Medical Society; Dr. Thomas F. Thomsen, vice-president; Dr. Elmer M. Sorenson, secretary-treasurer; and Dr. Oscar Alden, delegate.

Polk County

At the meeting of the Polk County Medical Society November 17 at the Des Moines Club, a "Symposium of Psychiatry" was featured. Speakers were Drs. Herbert C. Merrillat, Henry G. Decker and Charles C. Graves.

"Some Practical Aspects of Diabetic Management" was the theme of the December dinner meeting, held the fifteenth at the Des Moines Club. Speakers were Dr. Emmet T. Scales, "Diets in Diabetes," and Dr. Abraham A. Toubes, "Surgical Complications of Diabetes." Dr. Arthur G. Lueck and Dr. Henry Simpson, Jr. discussed the "Diagnosis of Diabetes" on the panel discussion.

Pottawattamie County

Guest speaker at the regular meeting of the Pottawattamie County Medical Society, held November 16 at the Hotel Chieftain in Council Bluffs, was Dr. Ralph C. Moore of Omaha. Using slides to illustrate his talk, he spoke on "Blood Volume Relationship to Cardiac Contour." Dinner preceded the meeting.

Sioux Valley Medical Society

The fifty-third annual meeting of the Sioux Valley Medical Society will be held at the Hotel Cataract, Sioux Falls, S. D., on January 25, 26 and 27. Following a "smoker," which will be held the first evening, there will be two full days of lectures and discussions.

Webster County

The Webster County Medical Society met November 18 at Hotel Warden in Fort Dodge. Following dinner, R. F. Ervin, assistant director of the Laboratory of Bacteriology at the University of Notre Dame, South Bend, Ind., gave an address on "Germ-Free Life and Its Application to Biology and Medicine."

Woodbury County

Members of the Woodbury County Medical Society heard an address by Dr. E. L. MacQuiddy, associate professor of Internal Medicine, University of Nebraska College of Medicine, at a dinner meeting November 30 at the Martin Hotel in Sioux City. Dr. MacQuiddy's subject was "The Problem of the Chronic Colon as Seen in General Practice."

An election of officers and business meeting were held December 14 at the Sioux City Club in the Warrior Hotel followed by dinner and a social hour.

Wright County

Wright County Medical Society elected Dr. Ralph L. Gorrell, president; Dr. Edward A. Watson, vice-president; Dr. John R. Christensen, secretary-treasurer; Dr. Ransom D. Bernard, censor; and Dr. George E. Schnug, delegate.

PERSONALS

Dr. Marion D. Allen has become associated with Drs. Loran M. Martin, Herman C. Kluever and Charles H. Coughlan in Fort Dodge. A native of Arkansas, Dr. Allen was graduated from the University of Arkansas School of Medicine in 1940 and interned at St. Vincent's Infirmary in Little Rock. He served five years in the Army Medical Corps, being associated with Dr. Coughlan for 18 months of that time. Recently he completed a two-year residency at the eye, ear, nose and throat hospital in New Orleans, La., and postgraduate courses in otolaryngology and ophthalmology.

Dr. Elmer S. Groben of Columbus Junction spoke on "Nerves" at the family night program of the First Presbyterian Church in Burlington on November 28.

Dr. Grace Hawthorne of Nevada is the new anesthesiologist at the Atlantic Memorial Hospital.

Dr. Richard M. Johnson of Slayton, Minn., recently became associated with Drs. Claudius L. Sievers and C. Dudley Miller in Denison. Dr. Johnson was graduated from the University of Nebraska College of Medicine in 1942. After his internship in Santa Clara, Calif., he served with the Navy Medical Corps. He practiced medicine in Slayton until his present move to Denison.

Dr. Robert N. Larimer of Sioux City gave a discussion on "Heart Disease" at a county-wide health meeting, sponsored by the Farm Bureau Women of Monona County, on December 8 in Onawa.

Dr. John C. Peart discussed the "Physical Aspects of Alcohol" at the First Presbyterian Church in Davenport on November 28.

Dr. Harold J. Roddy of Mason City addressed the Lincoln Parent Education group on November 23. His topic was "Sex Education."

Dr. Paul B. Skelley, Jr., formerly of Maquoketa, has opened an office in the Roshek Building in Dubuque where he will specialize in surgery. In October Dr. Skelley completed postgraduate work at the State University of Iowa School of Medicine.

Dr. Keith E. Wilcox directed a panel discussion on the topic of socialized medicine at the November 15 luncheon meeting of the Rotary Club in Muscatine.

Dr. Nathaniel G. Alcock, Dr. Ransom D. Bernard and Prof. Gerhard Hartman, superintendent of the University of Iowa Hospitals, were among the guest discussion leaders on the problems of getting news from hospitals and physicians at a meeting of 25 newspaper editors from Iowa and surrounding states, held in Iowa City on November 15.

MARRIAGE ANNOUNCEMENTS

Luken-Joynt

Miss Lucille Luken, formerly of LeMars and more recently employed in Washington, and Dr. Michael F. Joynt of Marcus were married November 15 in St. Anne's Catholic Church in Washington.

Clauss-Stamler

Miss Virginia Clauss, daughter of Mr. and Mrs. A. F. Clauss of Cedar Rapids, and Dr. Frederic W. Stamler of Iowa City, son of William Stamler of Muscatine, were married December 27 at St. Paul's Methodist Church in Cedar Rapids. The bride is supervisor of the Psychiatric Unit at Mercy Hospital. Dr. Stamler is in his last year of residency at the University Hospital in Iowa City.

DEATH NOTICES

Alcorn, William L., 68, died November 20 at his home in Washington after an illness of several years. Born in Allerton, Dr. Alcorn was graduated from Keokuk Medical College in 1904. He practiced medicine in Washington for 23 years after previously practicing in Haskins, Gibson and Ainsworth. He was a life member of the Washington County and Iowa State Medical Societies.

Boody, George, 82, died November 11 in St. Paul, Minn. Dr. Boody, who was born in Eldora, was graduated from the Northwestern University Medical School, Chicago, in 1891. He was assistant superintendent of the Independence State Hospital from 1918 until 1941 and formerly a member of the Buchanan County and Iowa State Medical Societies.

Braucht, Frederick E., 80, died December 4 following a stroke suffered earlier in the week. A graduate of Rush Medical College, Chicago, in the class of 1894, he had practiced medicine in Elkader since 1925. He was a member of the Clayton County and Iowa State Medical Societies.

Cooper, Thaddeus C., 69, died November 11 at his home in Ogden following an illness of several years. Born in Kellogg, Dr. Cooper was graduated from the Northwestern University Medical School, Chicago, in 1912. He was a member of the Boone County and Iowa State Medical Societies.

Linn, Ellis Gregg, 65, died December 4 after an illness of one month. A graduate of Hahnemann Medical School, Chicago, Dr. Linn had practiced

medicine in Des Moines for 42 years and previously in Mount Pleasant for five. He was a life member of the Polk County and Iowa State Medical Societies.

HISTORICAL INFORMATION WANTED

It is requested that any person having first-hand information regarding some of the early schools of medicine in Iowa communicate with Dr. John T. McClintock, Room 259, Medical Building, Iowa City, Iowa, for the purpose of completing information on the history of medical education in Iowa.

Information is particularly sought on the following schools: King Eclectic Medical College of Des Moines for the period 1880-1886; Iowa Eclectic Medical College about the same time; Council Bluffs Medical School, 1893-1895; a proposed school at Celfax in 1886; and the proposed W. F. Peck School at Davenport, 1896.

Your cooperation would be appreciated.

HEALTH UNITS FOR THE NATION

Resolution Adopted by the House of Delegates of
the American Medical Association
December 2, 1948
St. Louis, Mo.

WHEREAS, No amount of medical care of persons already sick will substantially reduce the incidence of illness; and

WHEREAS, The traditional position of the American Medical Association has been one of firm support of public health services, in fact, this constitutes a major element of the ten-point national health program of the American Medical Association; and

WHEREAS, Large numbers of local areas and counties in the United States are not now and never have been covered by adequate sanitary and other public health services; and

WHEREAS, The Surgeon General of the U. S. Public Health Service has announced that one of his first major objectives is assistance in development of local health units throughout the nation to meet this fundamental need; and

WHEREAS, The medical profession has not an opportunity to exert constructive leadership in this matter through the national, constituent state and component county medical societies; therefore, be it

Resolved, That the House of Delegates reaffirm its abiding interest in the necessity for the provision of full-time modern public health services at the local and community level, including sanitation and all the services usually considered essential for the preservation of the public health; and be it further

Resolved, That the U. S. Public Health Service be commended for and encouraged in its efforts for the further development of local health units for these purposes; and be it finally

Resolved, That the Board of Trustees be commended for its efforts in furthering full-time local health units and urged to continue actively all proper procedures to the end that local public health service shall become adequate throughout the nation.

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WHAT CAN THE GENERAL PRACTITIONER DO FOR THE NERVOUS PATIENT?

Walter C. Alvarez, M.D., Rochester, Minn.

I think the general practitioner often handles nervous patients more wisely than do some of us consultants in medical centers. His advantage in the country or small city is that he knows many of his patients well, knows the family, and, better yet, knows something of the patient's life and perhaps of some tragedy which could produce a neurosis. A physician like myself, who has never seen the patient before and knows nothing of the family and background, is badly handicapped in this regard, and hence can miss the diagnosis.

The Family Physician Is Helped to a Diagnosis by Knowing His Patients

When the family doctor is called to see a scrawny, psychopathic-looking young woman, he may already know all he needs to know about her; possibly he brought her into the world and has taken care of her ever since. Knowing her frail, sickly mother and her lazy or hard-drinking or good-for-nothing father, he is aware why the girl never has been strong or well. He knows that "the contractor put in poor materials." From the time she grew up, she has always had a headache, backache or difficult menstruation, and she has always been ailing and breaking down in one way or another. Whenever she slipped and fell or whenever she got a little cold, she had to stay in bed for weeks. Perhaps she did fairly well until she graduated and got her first school, or until she had her first child. Then she became a wreck.

Knowing these things, her doctor has no illusions about being able to cure her suddenly with any medicine or operation; he knows that to really change her he would have to start with a different set of grandparents. I, never having seen her

before, might get the idea that if I were to have a surgeon take out her appendix or a diseased ovary or if I were to fill her up with estrogens, I might make a new girl out of her. Her old doctor might remind me that no operation will ever make a Pomeranian into a bulldog.

Let us also suppose that one day the old doctor is called to see the girl's younger sister who is having what looks like mild hysteria. Perhaps, then, he remembers having heard some gossip in town to the effect that the young man who was going with her for a while and was talking of marrying her got fed up with her complaining and sickness and suddenly married another girl. And there the doctor has a good explanation for all her aches and pains and curious spells.

Because of this special knowledge which many doctors have about their patients, I don't worry so much in such cases about what will be done to nervous people. So commonly, family doctors know the cause of the miseries. But let us look over some of the things that all of us physicians can do for these unfortunate persons.

The first thing I would suggest is that we try more often to give them a "square deal." So often we do not give them that even when we examine them most thoroughly. We don't always take a history good enough for the making of a correct diagnosis. Perhaps, when the results of the examination are negative, we prescribe some penicillin, hoping that it will work a cure. When it does not, we may think of opening the abdomen and looking around inside.

The Average Physician Does Not Think Often Enough of a Neurosis.—My experience as a consultant has shown me that a high percentage of even us internists do not think often enough of the possibility that the patient before us has a neurosis. We spend our lives looking for organic diseases, and too often it does not enter our heads that the woman across the desk might be dying of a broken heart. Perhaps she just lost her adored husband or her aviator son, or

had to stand by helplessly and watch her only daughter marry a drunken wastrel. Perhaps the woman's illness is all due simply to the fact that she hasn't recovered from these shocks. But will she tell us of these sorrows? Usually not. Unless we physicians think to ask about such things, we are not likely to hear of them.

The other day I saw a woman who in her home city had been perfectly willing to have her gall-bladder removed just because it "emptied a little slowly." Her aunt objected and brought her to me. Seeing her sad, apathetic face, I questioned her and found that her whole trouble was that her much-loved husband had dropped dead shortly before, and for lack of funds she had had to move into a lonely room in a cheap lodginghouse. There she spent her nights trying to make up her mind to commit suicide. No wonder she was ill! I am sure her busy surgeon would never have thought of operating on her if he had taken time to ask a few questions to learn what was really wrong.

Many Physicians Fail Even to Think of the World of Sorrow and Neurosis About Them.—Recently, I was much impressed by the experience I had one afternoon as I saw several patients who had been referred to me by good internists who thought that the patients had some hidden disease in the stomach or bowel.

First I saw a nice-looking woman of 51 years, who had been through several medical examinations carried out in cities near her home. She had received several diagnoses of organic disease, but treatment for these troubles had done nothing for her. Noting that one of her complaints was the nervous type of bloating which is not associated with gas and knowing that this disease usually is due to sexual unhappiness, I asked her how she and her husband were getting along. After weeping a bit, she told me that after some thirty years her husband's old school sweetheart had started writing him again and telephoning every day. This had upset my patient greatly, and she was the more disturbed when one day during a squabble the husband lost his temper and told her that he would have been better off if he had married that girl. This had enraged the wife so much that for the next two years she had been upset and often talked of divorce. On learning that neither she nor the husband really wanted a divorce and that the old sweetheart who had made all the trouble had given up and dropped out of sight eighteen months before, I got the couple to make up and bury the hatchet. They did this so well that soon they went away smiling. It was their impression after talking things over

that all of the wife's indigestion had come with her unhappiness.

In the next room I found a nice-looking young woman whose physicians had written to say that she was having attacks of intestinal obstruction. A few times a year she would have some abdominal pain and then would vomit steadily for several days. A few questions made it almost certain that her spells had been attacks of migraine in which the nausea and vomiting were so severe that she didn't think to mention the preliminary unilateral headache and scotoma. Her worst spell had come when the man whom she had expected to marry had suddenly married someone else and her next worst when she walked out the day before she was to be married to the man who had gotten her on the rebound.

The next patient was a man who complained bitterly of a feeling of distention under the upper half of his sternum. It sounded to me like severe globus hystericus. Some of his home physicians had thought he had beginning Hodgkin's disease; others felt sure he must have an ulcer or a diverticulum in the esophagus; others thought he had heartburn; and some diagnosed angina pectoris on the strength of a few changes in the electrocardiogram. My colleagues and I could not see anything wrong in either his lungs, esophagus or heart. The constancy of his distress, day and night for more than a year, spoke strongly for a neurosis.

With great difficulty I drew from the man the admission that the trouble had started when he had had a bitter legal battle with his ex-wife, in the course of which his son had been taken away from him and he himself had been jailed for contempt of court. This public humiliation so enraged him that, thereafter, his days and nights had been filled with bitter hatred for the woman and thoughts of how he was to secure revenge. This bitterness was written all over his face. His life was dedicated to getting back at the woman in some way, and his painful emotion was almost killing him.

Next there was a man who had been treated off and on for ten years by internists and gastroenterologists, most of whom had diagnosed duodenal ulcer. But no ulcer could be demonstrated roentgenologically, and the story was not that of hunger pain, but rather that of nervousness, nausea, fatigue, insomnia and periods of depression. Significant was the fact that several Sippy treatments had not helped him.

Finding nothing in his long-written record about the origins of his trouble, I asked him how and when it began. He told me it started one

morning when a friend of his burst into his room, all excited, to say that another friend had been found hanging from a beam in his basement, where he had committed suicide. This threw my patient into a terrible funk, and filled him with the fear that he too would commit suicide. Because after this happening he was afraid to sleep alone, his physician suggested that he get married. No sooner said than done. He ran out to the near-by restaurant where he usually had his meals, grabbed the girl who usually waited on him and married her. Naturally, this loveless venture went badly, and the two did a lot of fighting which didn't help matters.

As I expected, the essential part of the story was that the man had a poor nervous heredity. His mother and an aunt each had had several attacks of melancholia, and in one of them the aunt had committed suicide. The son of another aunt was insane. This was why he was so afraid he would commit suicide, and doubtless was why he kept having one mild depression after another. Every physician who had seen him in the ten years had missed the essential point, which was that for years he had been on the verge of insanity. I suppose they hadn't thought of it, and their assistants had never elicited the real story. To them he had talked only of his abdominal discomforts.

As I went home that afternoon, the thought came to me more forcibly than ever before, "Why hadn't the other internists and consultants who had seen these persons promptly recognized a nervous disorder and unearthed the cause of it?" In none of the cases was the diagnosis at all difficult; it didn't take any particular brains on my part; all that was needed was that someone talk to these people for a half hour or long enough to recognize the features of a neurosis, to think of the probability that there had been some tragedy in the person's life and to ask about it. That was all. The difficulty before, as shown by the letters these patients brought, was that every physician who had seen them had had his heart set on finding a localized organic cause for the symptoms. None of the physicians had thought of anything else. The world of tragedy and sorrow and neurosis all about them evidently was to them a closed and never-opened book.

Can We Afford to Take Time?—Recently a friend said to me, "But, Alvarez, that sort of talking to patients takes time, and most of us are too busy ever to spend a half hour with anyone. We cannot do that and earn a decent living." I wonder. I have always earned a living, even when I was giving more than half of my

time to a university. Actually, did my friend's question do him honor? Surely he did not mean to imply that we physicians should do poor, futile, stupid work for our patients simply because we will not take the time to do good and useful work. That is a shameful thought. We all know that the physician who is so hurried at the first interview with a patient that he cannot recognize a neurosis and determine its cause is bound to waste much time later as he carries out one futile treatment after another and perhaps performs one futile operation after another.

I will admit that sometimes I have to give one of these persons several interviews on different days before I can get the all-important story of some strain or unhappiness, but as I grow older and perhaps more skillful at the job I find I can often learn what I need to know in the first half hour. Admittedly, the conscientious internist who wants to go on doing good work must somehow or other limit the number of patients he sees in a day. From personal experience I know this limitation is a difficult process, but unless a man whom his patients like does struggle to hold down the size of his practice, he will soon be doing little more than counter prescribing.

Sad to relate, we physicians sometimes fail to recognize a neurosis even among our own relatives. Occasionally, a fine mature physician will bring in his own wife or daughter complaining of a typical neurosis, which he had not recognized for what it was. It hasn't occurred to him that an unhappy experience through which the woman had passed or was passing at the time could have accounted for the symptoms. The reason for his diagnostic failure probably was that, like me, in medical school he had never had a single lecture on the common neuroses and minor psychoses.

Defects in Medical Teaching

Even today, professors in medical schools are much too inclined to neglect the neuroses and to demonstrate in the amphitheater examples of only the most rare and bizarre organic diseases. A teacher enjoys showing a case of Ayerza's disease, idiopathic amyloidosis, calcified pericardium, Addison's disease or terminal ileitis. This is interesting, but the teacher should remember that when his students graduate and go out into practice they will rarely, if ever, see or recognize one of these diseases. What they will see every day will be nervous men and women with negative findings and all sorts of distresses everywhere: backaches, headaches, dysmenorrhea, flatulence, fatigue and lack of energy. That is why, whenever I am asked to give a clinic at some medical

school, I ask the professor to let me have just a scrawny little neurotic woman with a long list of distresses with no organic disease to explain them and with perhaps the scars of five or six futile operations on her abdomen. This is the sort of patient I'd like the students to know so well that some day they can recognize her type at a glance.

The Diagnosis of a Neurosis Should Not Be Made by Exclusion.—One of the bad features of medical practice today in that we physicians so often try to diagnose neurosis only by exclusion. We put a patient through all the tests, and if she manages to come out with negative reports, we say she has a "neurosis." The trouble with this technic is that too often during the examination several little abnormalities are disclosed, abnormalities which have nothing to do with the illness, but which satisfy the examiner and lead him to conclude that the diagnosis has been made. The terrible thing is that he may then see no need for giving further thought to the problem, and as a result the real disease goes unrecognized and unrelieved.

Thus, recently I saw a woman who was so happy because she was feeling much better than when I had seen her the year before. At that time she had been going from one internist to another trying to find out why she felt so tired and miserable. She underwent several complete overhauls and since all that could ever be found wrong was an unusual blood-sugar curve, several able internists had spent much time trying with hormones and diet to change this curve back to normal. They didn't help either the curve or the woman. Why? Because the slight variation from normal in the curve was of no importance. The important things were that (1) the woman had a poor nervous inheritance which made adjustments to living difficult for her, and (2) she had been beaten down and worn out by overwork, several personal and financial worries, and unhappiness. Her business was losing money, and she was working desperately to pull it up; in addition, she and her husband were living apart, and this distressed her. I persuaded her to sell the business and go back to living with her husband, and soon she was feeling like herself again.

Decerebrate Medicine.—I often find myself protesting at the modern method of trying to diagnose from the results of tests without taking a thorough history or thinking much about the problem. I call this "decerebrate medicine." One day I myself tried it and experienced humiliation. I was in a hurry, trying to get away for my vacation, and hence when I saw a woman

whose problem had apparently been solved by my assistant and the roentgenologists, I did what I decry and accepted the diagnosis without giving any thought to it. According to the history as I found it written out for me, the woman was coughing up a pint and a half of sputum a day. The assistant had ordered a roentgenologic examination, stating on the card that she probably had bronchiectasis, and the report showed shadows at the bases of both lungs, compatible with this diagnosis. As is the custom in many medical offices today, I unthinkingly accepted this diagnosis and sent for a lung specialist. When he came in, he started doing what I would have done if I had had to go to his office to consult in a case of stomach trouble; he started retaking the history *in detail*.

He said, "When do you have most of your cough?" Her answer was, "Who said I had a cough? I didn't say I coughed it up." "Well, then," asked the lung specialist, "what do you do?" She said, "It just wells up into my throat; I don't know where it comes from." He said, "What does the stuff look like?" She replied, "I think it's saliva." Then he asked, "Do you have any trouble swallowing?" She answered, "Yes, in the last six months I have had to wash solid foods down with water."

You can imagine how ashamed I felt! And note how easy it is to make a diagnosis when one takes the trouble to ask two or three questions. With the answers to the few questions which either my assistant or I could and should have asked, it was perfectly obvious that the woman had some obstruction around her cardia. Actually, it was shown later that she had a cardiospasm and not bronchiectasis.

Another time when I started to practice decerebrate medicine, I fortunately stopped and corrected my mistake before I disgraced myself and ordered a useless operation. Again, because I was overworked and trying to see too many patients, I tried to cut corners. I thought I could cut one safely when I saw a stout, handsome woman of 45 years. In her folder were three histories taken by three internes, all stating that (1) for years she had had severe gallstone colics, (2) a surgeon had removed a gallbladder full of stones, and (3) after that she had gone on having colics just as before. Now she was back to have her common bile duct explored. In the last-taken history, there were statements to the effect that with some of the recent attacks of colic she had been a little jaundiced and had had some chills and fever. It looked like a textbook picture

of a common duct stone, and I was about to turn her over to a surgeon for operation when I realized that I was practicing the very type of decerebrate medicine about which I am always decrying and complaining. I had not cross-questioned the woman and satisfied myself as to the essential points in the history. Accordingly, I told her to come back later when I would have more time to go into the problem in detail.

On sitting down with her again, I said, "Now, tell me about these colics; how bad is the pain? Do you have to have morphine?" To my great surprise, her answer was, "Who said I had pain? I never had a pain in my life?"

"Well," said I, "what then *do* you have in the so-called colics?" She said, "I vomit my head off for anywhere from one to three days." I said, "Do you first have a headache on one side of your head?" "Yes," she replied, "always." I asked, "How do you get relief?" She said, "Morphine was no good, but finally my doctor found that an injection of gynergen would do the trick." I asked, "How about the fever?" "Oh," she said, "that is around 99.5 degrees in the afternoons when I am tired." In other words, it was probably normal for a nervous woman.

When I asked about the jaundice, she said, "Well, I wouldn't call it jaundice; possibly I was a little sallow, but I couldn't be sure of that." I asked, "How about the chills?" She said, "Oh, I had just one once when I had a row with my husband. I guess it was a nervous chill."

Evidently, in the case of this migrainous woman the gallstones had been entirely silent, and hence she was no better for having them out. If I had sent her in for an operation on the common bile duct, I would have been ashamed when nothing was found.

The Dangers of Trying to Make a Diagnosis From One Test.—Obviously, there is no substitute for taking a good history and thinking about it. As I have said before, today too many of us physicians are trying to make diagnoses purely from electrocardiograms, laboratory or roentgenologic studies. Recently I saw a man, a fine big handsome fellow, 50 years of age, who had just been retired from his company because a nationally known group of physicians to whom he had been sent for a check-over had made the diagnosis of hopeless "coronary disease." This opinion was based on one electrocardiogram, which my own cardiologist friends thought was normal for his age. They asked him if he was ever short of breath on exercising, and he said, "No more than the average for a man of my age." They asked

if he had ever had pain which stopped him from walking, and he said, "Never."

When asked if he could go hunting in hilly country, he said he recently had been on a bear hunt in the Canadian Rockies, and he and an Indian guide had tracked a bear much of a day, uphill and down, without distress; obviously, then, he had an unusually good heart. So far as I could see, he should never have been retired, and since then he has gone into a new business.

You and I, all of us, are proud of medicine and the tremendous advances it is making these days, but we must face the fact that not all of it is good. As Sir Walter Langdon-Browne once said, "Despite some disagreeable eddies and unsavory backwaters, the main stream [of medicine] runs clear and sweeps onward with gathering impetus." Only some of our practice is thoughtless and wrong, and we must fight against the thoughtlessness. We must do what we can to teach some of our brethren that they cannot safely diagnose without looking at their patients, asking them questions or thinking about their problems.

Placebos of Diagnosis

One of the most unfortunate things that some of them questions, or thinking about their problems, patients by giving them what they greatly desire. As you all know, they want a nice-sounding Latin diagnosis of organic disease. If we tell them the truth about themselves, they do not like it, and perhaps, after we have spent much time trying to explain the situation, they go away incredulous and even angry. Hence it is that many a physician is sadly tempted to take the quick, easy and most profitable way out, which is to give the patient a diagnosis that sounds good but does not mean much. The simplest method is thoughtlessly to accept and pass on whatever diagnosis has been handed us by a laboratory worker or a roentgenologist.

For instance, a while back I saw a queer-looking dowdy old maid who, so far as I could see, was mildly insane and had been so for years. Her main symptom was the almost constant regurgitation of food. She didn't like my diagnosis of nervous trouble, and later she wrote caustically to say that at last she had found a wonderful internist who had discovered the disease which everyone else had missed. Finding that in low dilution her serum agglutinated *Brucella abortus*, he had diagnosed brucellosis and thereby given her great joy. It seemed to me that the doctor should have been disturbed a bit by the facts that (1) she had been ill for twenty years, and (2) her symptoms were not at all those of

brucellosis. But, anyway, he had for a time a grateful patient who sang his praises and sent him patients. The only trouble with this type of practice is that if the physician keeps it up for some years, he will come to believe firmly in his own buncombe and will lose his scientific soul—granting, of course, that he ever had one. -

Persons with decided neuroses or mild psychoses will sometimes come in with the diagnosis of a low blood sugar. Recently I saw such a woman who had had a piece of her pancreas removed surgically on the supposition that she had a cancer of the islets of Langerhans. I took my hat off to the pathologist who had had the courage to report that the tissue was normal. From the history, it was clear that the woman had a typical migraine, and my laboratories on several occasions reported normal values for the blood sugar. In this case, if the eminent consultant who had seen her had taken a better history, he could have made the correct diagnosis. He should have known also that she couldn't have had a true hyperinsulinism because she had no trouble during the night or the early morning hours when her blood sugar would be at its lowest. Her symptoms were not those of a low blood sugar; they did not come when she was hungry; and the eating of candy had never stopped her headache. Many physicians do not seem to realize that often, as in this case, one can safely rule out the diagnosis that the patient brings in simply by asking a few questions.

A few years ago I kept seeing many nervous patients who came in with the diagnosis of a low blood calcium. I think now this placebo is going out-of-fashion. Other persons had been told they had a floating kidney, a Hunner stricture of the ureter, spastic colitis, ptosis, diverticulosis of the colon, or other things which seem to me usually to be only placebos.

Medicine on the Whole Is Improving, But There Are Some Bad Trends

I could go on at length telling of patients whose supposedly organic disease proved, on a little questioning, to be purely functional and due to some tragedy, unhappiness or worry. I hate to seem so critical of our profession and of some of our present-day practices. My criticisms come not from any bitterness or malice, but simply from a great desire to make the practice of our beloved medicine better and better. With Robert Louis Stevenson, I believe medicine to be the finest profession there is; I know that most of its practitioners are devoted, idealistic, generous men who struggle hard to keep up-to-date scientifically and to do the best type of work they can.

As I said before, on the whole medical practice is constantly getting better. More and more frequently, physicians are going back for graduate work, and with the building of many fine hospitals and clinics throughout the land, more and more doctors are receiving the help of laboratories and roentgenologic departments, and thus are able to do a fine type of work.

What I hope now is that we can avoid the pitfall of blindly worshipping the new methods of diagnosis and of getting the idea that they can safely be depended on without the help of any thinking and observing on our part. That there is need for talking about this tendency and warning against it must be obvious to all, and it would be even more so if you could come and sit beside me at my desk for only one week. I am sure then that, after seeing some of the mistakes that could so easily have been avoided with a little care, you too would want to go out, up and down the land, preaching, as I am preaching, against the *thoughtless* use of tests and the idolatrous worship of tests alone.

The Medical Student Sees a Disproportionate Amount of Organic Disease.—One reason why many young physicians do not think of neuroses often enough is that during their three or four years of study in a charity hospital they saw for the most part men and women who were suffering from the end-results of serious organic disease of the heart, blood vessels, kidneys, nervous system or joints. Many a young ex-resident has said to me shortly after going out into practice, perhaps as an assistant to a busy downtown internist, "Doctor, I suddenly find myself thrust among a group of patients so different from those in my old hospital that I don't know how to handle them or what to make of their complaints; I find myself quite unprepared to take care of them."

Psychiatrists Are Now Being Added to Clinic Staffs.—Fortunately, every good medical school today is putting in a department of psychiatry, and in the best schools the psychiatrist works in the clinic with and alongside internists. The psychiatrist is no longer looked on as a foreigner who will be allowed to take over after the internist and the surgeon have had ample opportunity to try their hands and have failed.

The men who run city, county and university hospitals and clinics are at last coming to see that a good psychiatric service can save millions of dollars a year by culling out those many psychopathic and mildly insane persons, the so-called chronics, who throughout their lives keep going from one service to another, each time getting "the works." Most of them have been operated

on time and again to little purpose because the essential diagnosis of psychoneurosis was not made. I cannot see why these people should go on wasting millions of dollars' worth of service and countless hours of time of many physicians when any good psychiatrist or wise internist could see, almost at glance, that in their cases no amount of treatment would do much good. Nothing will ever make them over into healthy, efficient members of the state. Would it not be wiser, without neglecting them, of course, to spend less money on them and more on the type of patient who could be helped or cured and put back into life and industry?

The Recognition of the Nervous Patient

Some of you may ask, "But how does one suspect that the patient has a neurosis?" One can often recognize the type of person the minute he comes in. Signs of nervous tension are recognizable, and one can learn much about the patient as he tells the story of his illness. A woman's chin muscles may be quivering; she may break down and cry as she tells parts of her story; she may be having tics; she may be too tense and nervous to sit quietly; she may be belching repeatedly; or she may smoke one cigarette after another.

The Way the History Is Told.—The person with organic disease will often tell his story in a few minutes, whereas the person with functional troubles may talk two or three hours without giving a coherent story. The most difficult type of patient is the one who will not answer the question that he is asked; he will answer irrelevantly, and according to Ross this means he is decidedly psychopathic. Often, an assistant who has tried to get a history from this type of patient will apologize to his chief, but when the chief tries to get a sequent story he has just as bad a time. The patient's brain is too disorganized for him to give a good history.

Syndromes That Are Always Functional in Nature.—There are some syndromes that are practically 100 per cent functional and should immediately be recognized as such. Typical is the regurgitation of food which comes immediately after meals or even during the meal. The sensation of quivering or of "butterflies in the abdomen," or of burning in the skin of the epigastrium is practically always nervous in origin. The sore bowel syndrome, or so-called mucous colitis, is functional in nature and is based on a hereditary tendency. Sudden attacks of diarrhea, lasting a few hours or a day or two, are often due to panic. Constant aches in the abdominal

wall, especially when they spread all over one side from the head to the toes, are practically always of psychic origin. Many of the women with such aches will say that they had their first attack years before; a year later they had another; then perhaps another in six months; and gradually the interval shortened until the distress was constant. That is typical of the abdominal aches for which no local cause can be found.

The Migrainous Woman.—Always be on the watch for the trim, little, wide-awake, quickly-moving migrainous woman. Always ask such a woman if she has had sick headaches because when you learn that she has you will know a great deal about her, her hypersensitiveness, tendency to great fatigue, slight dizziness and many other symptoms. Some of these persons are operated on several times for migraine equivalents in the abdomen: that is, unusual attacks of abdominal pain or perhaps spells of vomiting for three or four days, attacks which often frighten a surgeon into opening the abdomen and searching for an intestinal obstruction. The fact that the patient has had these spells for years without coming to any bad end can serve to rule out any such serious lesion.

The Epileptic Without Fits.—One should watch out also for the rather sullen-looking irascible person with a story which suggests ulcers or with a history of unusual attacks of abdominal pain. If one asks tactfully, one may find that some of the relatives have had falling spells. Or if one gets an electro-encephalogram, one is likely to find that the patient has dysrhythmia. As Dr. Lennox has said, there are hundreds of thousands of epileptics *who have never had a fit*. We should learn to recognize them.

The Distress That Is Not Related to Meals or to Defecation.—One of the most important questions that one can ask a patient with distress in the abdomen is, "Is this trouble related in any way to the taking of food or to the emptying of your bowel?" If not, the source of the trouble is not likely to be in the digestive tract. A knowledge of this fact alone and the wide usage of this technic would save thousands of persons every year from having a futile operation.

Fibrositis of the Abdominal Wall.—Among persons with an ache in the stomach, one of the common troubles I see is fibrositis in the abdominal wall. The patients usually have had lumbago, sciatica, cricks in the back, perhaps aches in the thoracic wall or attacks of wry neck or arthritis in various parts of the body. Often one can make the diagnosis in a moment by lifting

up a fold of the abdominal wall and pinching it, showing that it is highly sensitive. The thoracic wall may also be sensitive to pressure.

Nerves Playing Tricks.—Another group of patients I see often are those I say have “nerves playing tricks on them.” Their essential organs are sound, but the functions are being upset by an irritable and erratic autonomic nervous system. These people have palpitation, extrasystoles, possibly attacks of paroxysmal tachycardia, mucous colic, nausea, occasional diarrhea, an irritable bladder which empties too frequently during the day but not at night, chilly sensations, an afternoon temperature of 99.5 F., excessive sweating, marked tension in the muscles of the neck and, in the case of women, menstrual irregularities. Some of them have insane relatives, and this is the essential point in understanding their problem.

An Example of Psychotherapy as Used by an Old General Practitioner.—In closing, I'd like to relate how a fine old general practitioner, my father, used simple psychotherapy every day in his practice. I'm sure that many of you older men have done this sort of thing a thousand times. One day in Los Angeles, a Mexican woman came in with her intelligent-looking twelve year old boy who, she said, had been an incorrigible truant from school. Having read in the papers that brain surgeons are now operating on criminals in an attempt to make them normal and good, she wanted to know if her boy could be so treated.

My father simply turned to the boy and asked, “Why won't you go to school?” The answer was, “The kids laugh at me when the teacher calls the roll.” He asked, “Why do they laugh at you?” The boy replied, “Because my name is Isabel.”

In Mexico, when a child is born, the priest gives him the name of the principal saint for that day. Knowing this, my father turned to the mother and asked, “What would you like to have called him?” She said, “Charles.” “All right,” said my father, “you will now call the boy I. Charles Fernandez, and he will answer to Charles on the roll call; here is a letter to the teacher.” The boy went off happy and cured.

This is the sort of simple, practical homely psychotherapy which all sensible physicians have practiced since the time of Hippocrates. May all of us practice more and more of it as time goes on. If we will only do this sort of friendly work, our patients will love us, and we won't have so many threats of socialized medicine.

THE SURGICAL TREATMENT OF GASTRIC LESIONS

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The surgical treatment applicable to lesions of the stomach here presented is limited to procedures which have survived a critical analysis based upon operative mortality and end-results. The indications and contraindications for operation are briefly discussed. A general bibliography is appended.

Symptoms of lesions of the stomach result from disturbances in the normal physiological functions of motion-secretion and absorption. In order to avoid useless, meddlesome, exploratory laparotomy, it is important to realize that disturbed physiological function may occur in the absence of organic disease of the stomach. Lesions of the stomach which disturb the normal function must necessarily include the complications of duodenal ulcer, such as hemorrhage, obstruction, intractable pain and perforation.

Traumatic Lesions of the Stomach: The mobility of the stomach renders it less susceptible to damage from crushing injuries than fixed organs. In all wounds of the stomach, the posterior gastric wall must not be overlooked. Gastric contents should be removed from the peritoneal cavity only by suction, and any vigorous attempts to cleanse it are to be condemned. Intraperitoneal implantation of sulfonamides is not used because of toxicity to the liver from the high portal concentrations obtained. Systemic therapy is to be desired until the report is obtained from the peritoneal culture. Penicillin is likewise advisable in amounts up to 400,000 units daily. The wound is flushed with saline after closure of the peritoneum.

Aside from local therapy, which also includes use of the Wangenstein tube for decompression of the stomach, the systemic care must consider the burn-like character of the physiological disturbance as well as the nature of the infecting organism. Therapy should stress replacement of plasma and blood to avoid a shock-like state both preoperatively and postoperatively.

Foreign Bodies

Gastrotomy is seldom used and then most commonly among patients confined to a mental hospital where bezoars are frequent. The incision in the stomach should be at right angles to the long axis of the stomach.

Gastrostomy: Lesions of the esophagus obstructing the passage of food frequently necessitate a gastrostomy. On occasions, a preliminary

gastrostomy is done before surgical treatment of the obstructing lesion, such as pharyngeal diverticulum and strictures. The commonest cause of esophageal obstruction is carcinoma, and inoperable lesions may require a gastrostomy. Obstruction due to cardiospasm should not be misinterpreted as a contraindication to gastrostomy. Cicatricial stenosis of the esophagus produced by escharotic ulceration often requires gastrostomy to save and maintain life. The gastrostomy may be temporary and used as an aid to treatment of the stenosis or it may be of necessity permanent. The invagination of a cone of stomach around a large rubber tube by means of multiple "purse-strings" or by the formation of a tube which leads directly from the stomach to the skin. The last, known as the Janeway's Gastrostomy, best fulfills the requirements of a gastrostomy. Gastrostomy closure is desired after successful treatment of an esophageal stricture.

Congenital Pyloric Stenosis: There have been no important changes in the treatment of congenital pyloric stenosis using the Fredet-Ramstedt operation and emphasizing immediate preoperative preparation and postoperative care. Parents may be assured that their baby can be operated upon successfully and will retain all feedings and gain weight within a week. There will be no stomach trouble later in life as a result of stenosis in infancy. The most important factor in the present low surgical mortality of less than 1 per cent is the restoration of the fluid lost by vomiting before operation. The operation is never considered an emergency, and it is perfectly safe and often necessary to spend several days in preparing for it. Hypodermoclyses of normal saline are used to correct dehydration. Five per cent glucose solution is retained better than formula.

Carcinoma of the Stomach: Carcinoma of the stomach still presents a serious problem to the diagnostician and surgeon because of the low rate of resectability. Delay in diagnosis accounts for the low rate of operability. Ninety-eight per cent of gastric tumors are malignant. There has been no improvement in the earlier diagnosis of gastric malignancy in the past 10 years. Over half of the patients diagnosed with gastric malignancy are inoperable, and less than half of those operated upon can be resected. One must remember the frequency of malignancy of the stomach (30,000 deaths per year) and never treat indigestion or gastric symptoms until adequate study has ruled out malignancy.

The last ten years have produced numerous reports of total gastrectomy for malignancy of the

stomach. The average mortality has been around 25 to 30 per cent, and is expected to be lower with better selection of cases, improved technic, skillful anesthesia, chemotherapy and careful preoperative and postoperative care. The only definite indication for gastrectomy is when a tumor so involves the stomach that it cannot be completely removed by partial gastrectomy. It is contraindicated if all demonstrable tumors cannot be removed. There is evidence to show that the combined abdominal and transthoracic approach is superior to either one alone. The abdominal approach permits excellent evaluation of the operability, and allows better surgical technic in closing the duodenum and performing entero-enterostomy. The transthoracic route permits a safe anastomosis between the esophagus and jejunum which had proved in the past to be a problem.

Gastric Ulcer: Whenever a gastric ulcer is found proximal to the pylorus, therapy should be carried out with the idea in mind that surgery will be performed as soon as possible. It is known that about 1 in 4 so-called benign ulcers are probably malignant in spite of all clinical means of diagnosis including gastroscopy. If conservative therapy is used, the occurrence of healing in six weeks and its rigid maintenance must be the prerequisite for the patient's avoiding surgery.

Most surgeons have accepted subtotal gastrectomy as the operation of choice in gastric ulcer. The ulcer-bearing area is removed, as well as the pylorus and antrum, which eliminates the chemical phase of gastric secretion and causes an appreciable reduction in the acidity. In the absence of gastric acidity, gastric and gastrojejunal ulcers apparently do not develop.

Juxta-esophageal lesions, if the ulcer-bearing area is to be removed, entail a complete gastrectomy, an operation attended primarily by a high mortality rate and, if the patient survives, by nutritional difficulties. It is better to perform a palliative gastric resection to these benign ulcers. Subsequent malignant degeneration of a previously benign ulcer is rare, but one may diagnose a lesion as benign when in reality it is malignant. However, the results of a total gastric resection for a penetrating carcinomatous ulcer of the cardia are so poor that the error of performing a total gastrectomy for benign ulcer is decidedly worse than that of performing a palliative gastrectomy for a high-lying malignant ulcer.

A high-right gastric ulcer may be removed by the transthoracic approach, but the acid-producing portion of the stomach remains. In the

hands of most surgeons, the mortality would probably be greater than the non-removal of the benign ulcer by a palliative gastrectomy.

Duodenal Ulcer: About 10 to 15 per cent of patients with chronic duodenal ulcer entering a large general hospital must be treated surgically. These patients consist of those with varying degrees of chronicity who have developed cicatricial stenosis, those who continue to bleed massively with each exacerbation and those who continue to have pain on the best ambulatory medical regime known. Subtotal gastric resection, including the distal stomach to eliminate all the acidanttral mucosa, offers the greatest opportunity for cure. The mortality in subtotal gastric resection for duodenal ulcer in most large hospitals is 1 to 2 per cent. The mortality usually arises chiefly from operations upon patients who are acutely bleeding.

Acute perforations are dealt with by simple closure of the ulcer, aspiration of liquid material from the peritoneal cavity and closure of the wound without drainage. Occasionally, a tab of omentum is used rather than anatomic suture in the closing of the ulcer.

Ulcer patients may suffer a temporary obstruction during acute exacerbations, having a sudden onset of symptoms but being in a fair state of nutrition when seen. If good response follows gastric drainage and intravenous therapy over a few days, conservative treatment is probably the procedure of choice. Cicatricial stenosis results from long-standing ulcer with repeated episodes of activity. These patients are older and malnourished with a history of vomiting every day and improve only slightly on treatment. After adequate preliminary preparation, a radical subtotal gastrectomy should be performed.

Massive hemorrhage from duodenal ulcer is a difficult problem and accounts for most surgical deaths in treating chronic lesions. Age and the degree of arteriosclerosis present seem to be the only factors upon which one can rely regarding prognosis. Conservative methods prevail for persons under 45, and require the careful weighing of all evidence for early operation in those beyond this age. Massive hemorrhages occurring repeatedly over a period of several days is almost always surgically hopeless. Surgery must be considered early in the group mentioned. Early x-ray should be used to establish a diagnosis in the older groups and becomes an aid in the matter of deciding the subsequent care. The blood loss should be replaced. If it is not, the body will replenish lost blood volume from stores of extravascular fluid; the blood pressure will grad-

ually return to normal; and the patient will have a normal blood volume but a low hematocrit and a low serum protein. Replenishing the blood at this time in older patients may lead to cardiac decompensation.

Intractable pain has been considered as a valid reason for performing a subtotal gastrectomy in duodenal ulcer. It is, however, difficult to define the intractable ulcer. Many of these patients simply have lost patience with their symptoms and therapy; many need psychiatric aid; no doubt, poor medical therapy has caused the loss of patience in some; recent newspaper publicity has caused others to become restless and seek surgical care. It is certain that the occasional late complications of either gastric resection or any type of surgery such as gastro-enterostomy and vagus nerve resection forbids the treatment of so-called intractable ulcer unless it is associated with other factors such as bleeding, chronic perforation or obstruction and then only after a thorough trial of medical therapy.

It is in the treatment of the intractable ulcer which is not obstructed, bleeding or perforated that the vagus resection has been recommended, but experience seems to indicate a recurrence rate which does not differ from that following subtotal gastrectomy. Recurrent jejunal ulcer following gastric resection varies from 2 to 12 per cent. Vagus resection seems to be the best means of handling this situation at the present time.

Whether or not the effects of vagotomy will be permanent depends upon whether there will be regeneration of the parasympathetic nerves or whether the remaining mechanisms will compensate in some way for the absence of vagus innervation. Observing on Hartzell's dogs, Vanzant revealed that though the reduction of acidity lasted several months, the acidity returned to normal after 2 or 3 years. Moore and his associates indicated a tendency for the gastric tone, as well as the night gastric secretion, to return to the preoperative level within a year following bilateral vagotomy in their patients. At least, doubt is cast upon the lasting benefits of vagotomy for duodenal ulcer. It is still an experimental procedure. The foremost indication for its experimental use at present is in treating recurrent ulceration in a gastrojejunostomy or inadequate gastric resection. A subtotal gastric resection should include two-thirds of the stomach. Wangenstein, who has insisted that three-fourths of the stomach be removed in all cases, has reported a series of 300 gastric resections with no recurrent ulceration.

Gastrojejunalocolic Fistula: Gastrojejunalocolic fistula is a complication of gastro-enterostomy, more serious and life-threatening than the original lesion for which the procedure was employed. It occurs in about 17 per cent of cases of marginal ulcer admitted for surgical care. The operative indication is absolute, and prolonged preliminary preparation is essential, sometimes requiring stage procedures. A one-stage operation is preferable, consisting of subtotal gastric resection and closure of fistulas.

BIBLIOGRAPHY

- Allen, A. W. and Welch, C. E.: Gastric resection for duodenal ulcer; follow-up studies. *Ann.Surg.*, cxv:530-543 (April) 1942.
- Allen, A. W. and Welch, C. E.: Subtotal gastrectomy for duodenal ulcer. *Ann.Surg.*, cxiv:688-707 (October) 1946.
- Brunschwig, A.: Radical surgery in advanced abdominal cancer. Univ. Chicago Press, 1947.
- Churchill, E. D. and Sweet, R. H.: Transthoracic resection of tumors of stomach and esophagus. *Ann.Surg.*, cxv:897-920 (June) 1942.
- Colp, R. and Druckerman, L. J.: Indications for jejunal alimentation in surgery of peptic ulcer. *Ann. Surg.*, cxvii:387-402 (March) 1943.
- Colp, R. and Druckerman, L. J.: Subtotal and palliative gastrectomy for chronic gastric ulcer. *Surgery*, xviii:573-582 (November) 1945.
- Colp, R. and Druckerman, L. J.: Palliative gastrectomy in selected cases of gastric ulcer. *Ann.Surg.*, cxiv:675-687 (October) 1946.
- Custer, W. C.: Survival after gastric resection in carcinoma of the stomach. *Surgery*, xvii:510-511 (April) 1945.
- Donovan, E. J.: Congenital hypertrophic pyloric stenosis. *Ann. Surg.*, cxiv:708-715 (October) 1946.
- Dragstedt, L. R., Harper, P. V., Jr., Tovee, E. B. and Woodward, E. R.: Section of vagus nerves to stomach in treatment of peptic ulcer. *Ann.Surg.*, cxvi:687-708 (November) 1947.
- Graham, R. R.: Total gastrectomy for carcinoma of stomach. *Arch.Surg.*, xli:907-914 (June) 1943.
- Hampton, A. O.: Safe method for roentgen demonstration of bleeding duodenal ulcers. *Am.J.Roentgenol.*, xxxviii:565-570 (October) 1937.
- Johnson, J. and Machella, T. E.: Vagotomy for treatment of peptic ulcer. *S. Clin. North America*, xvii:1406-1415 (December) 1947.
- Ladd, Wm. E.: Discussion. *Ann.Surg.*, cxiv:714-715 (October) 1946.
- Lahey, F. H. and Marshall, S. F.: Indications for, and experiences with, total gastrectomy based upon 73 cases of total gastrectomy. *Ann.Surg.*, cxix:300-320 (March) 1944.
- Livingston, E. M. and Pack, G. T.: End-results in Treatment of Gastric Cancer. Paul B. Hoeber, Inc., New York, 1939.
- Marshall, S. F. and Welch, M. L.: Carcinoma of stomach—rate of operability. *S.Clin.North America*, xvii:631-635 (June) 1947.
- Moore, F. D., Chapman, W. P., Schultz, M. D. and Jones, C. M.: Resection of vagus nerves in peptic ulcer; physiologic effects and clinical results, with report of 2 years experience. *J.A.M.A.*, cxxxiii:741-749 (March) 1947.
- Moore, F. D.: Current practices in surgical treatment of ulcer. *S.Clin. North America*, xvii:1071-1087 (October) 1947.
- Ransom, H. K.: Subtotal gastrectomy for gastric ulcer; a study of end-results. *Ann.Surg.*, cxvi:633-651 (November) 1947.
- Schiff, L., Stevens, R. J. and Moss, H. K.: Prognostic significance of blood urea nitrogen following Hematemesis or melena. *Am.J.Digest. Dis.*, ix:110-113 (March) 1942.
- Schoen, A. M. and Griswold, R. A.: Effect of vagotomy on human gastric function. *Ann.Surg.*, cxvi: 655-663 (November) 1947.
- Sweet, Richard H.: Total gastrectomy by the transthoracic approach; report of seven cases. *Ann.Surg.*, cxviii:816-837 (November) 1943.
- Thorstad, M. J.: Outlook on carcinoma of stomach. *Am.J. Surg.*, xiv:242-247 (May) 1944.
- Vanzant, P. R.: Late effects of section of vagus nerves on gastric acidity. *Am.J.Physiol.*, xcix:375-378 (January) 1932.
- Walters, W., Neibling, H. A., Bradley, W. F., Small, J. T. and Wilson, J. W.: A study of results, both favorable and unfavorable, of section of the vagus nerves in the treatment of peptic ulcer. *Ann.Surg.*, cxvi:679-686 (November) 1947.
- Walters, W. and Cleveland, W. H.: Results of partial gastrectomy for bleeding duodenal, gastric and gastro-jejunal ulcer. *Ann.Surg.*, cxiv:481-497 (October) 1941.
- Wangensteen, O. H., Varco, R. L., Hay, L., Walpole, S. and Trach, B.: Gastric acidity before and after operative procedure, with special reference to role of pylorus and antrum; preliminary report of clinical and experimental study. *Ann.Surg.*, cxii:626-670 (October) 1940.
- Wangensteen, O. H.: Role of surgeon in management of peptic ulcer. *New England J.Med.*, ccxxvii:191-196 (February) 1947.
- Wangensteen, O. H.: Causes of failure after gastric resection for ulcer; myth of intractable ulcer together with note concerning importance of vascular factor in genesis of ulcer. *Wisconsin M.J.*, xlv:878-888 (September) 1945.

THE ETIOLOGY AND TREATMENT OF UVEITIS

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The diagnosis and therapeutics of uveitis is one of the most discouraging tasks for both the patient and the ophthalmologist. Even after extensive study of the patient, the ophthalmologist is frequently unable to arrive at a conclusive etiologic diagnosis. Nearly all of the etiologic diagnoses are presumptive, and there is always a question in the ophthalmologist's mind whether he is correct in his deductions. This is particularly true when specific therapy has little or no effect on the progress of the disease. Woods,¹ Woods and Guyton² and Anderson³ have made detailed systematic etiologic studies in cases of uveitis. They have attempted to establish a source in the body which would give rise to the infection in the eyes. Some of the etiologic studies have been carried out in the Mueller Clinic in Vienna. On several occasions they have demonstrated tubercle bacilli in sections of eyes removed because of a long-standing uveitis. Histological studies such as these require serial sections of the eye stained for acid-fast bacilli. Even in these instances where acid-fast bacilli have been demonstrated, there is considerable controversy as to whether the organisms are actually the cause of the uveitis. When the organisms have been demonstrated, they are usually surrounded by entirely normal tissue. In one instance where the organisms were demonstrated in the retina in fairly large numbers, the appearance of the retina was normal, although the choroid and the ciliary body showed extensive inflammation but no evidence of bacteria. In tuberculous lesions elsewhere in the body where the organisms can be demonstrated in section, they are almost always found to be associated with the lesion.

Typical tuberculous lesions have been demonstrated in guinea pigs after inoculation with ocular material. In these instances, the tubercle bacillus was the cause of the uveitis. There have been many more inoculations with tissue from an eye in which a clinical diagnosis of tuberculosis has been made, but there has been no disease found in the guinea pig. Recently I had the opportunity to inoculate animals with material from granulomatous uveitis in which the clinical and pathological diagnosis was tuberculosis. Large amounts of material were inoculated into guinea pigs, but no disease developed. This does not altogether eliminate the tubercle bacillus from being the causative agent if one is to follow the

hypothesis of Woods and Burky⁴ since they combined allergy and immunity to tuberculosis in the same individual. The individual undoubtedly develops a high degree of allergy to the tuberculo-protein or possibly the tubercle bacillus, and there is certainly considerable immunity present in the individual who has an active tuberculosis. The immunity may be capable of at least localizing the bacteria and preventing their dissemination, but may not be sufficient to control the absorption of a tuberculo-protein from the live or dead organisms and thus produce the allergy reaction. It is well known that a single tubercle bacillus may live for years in what might be termed a spore form, since these spore forms of tubercle bacilli have been described. The negative results obtained after guinea pig inoculation of ground tissue may be explained by the fact that the tissue may contain tubercle bacilli, but the organisms cannot be released and allowed to produce the disease in the guinea pig since local tissue immune bodies are injected with the bacteria. The clinical diagnosis of ocular tuberculosis is, therefore, almost always presumptive.

Large numbers of individuals, of course, have had pulmonary lesions, the percentage varying between the urban and rural population. Most of these individuals have a healed lesion in their chests and a positive tuberculin. If, after examination, the only positive finding is the presence of a positive tuberculin and healed tuberculous lesions in the chest, the cause of the uveitis is, therefore, presumed to be tuberculosis. Because of the eye lesion being considered an allergic-immune reaction, the individual may then be desensitized by the injection of minute amounts of tuberculo-protein. There is no question that most ophthalmologists have seen a fair number of cases of chronic granulomatous uveitis do well on tuberculin therapy. There are, however, a great many patients treated with tuberculin who have shown no improvement whatever. The evaluation of treatment with tuberculo-protein then becomes confusing. The treatment takes considerable time, and if the uveitis is improving, one is hesitant to stop the treatment to see if the uveitis will continue to improve or will regress. Many ophthalmologists, particularly Knapp in New York and Woods in Baltimore, feel that treatment with tuberculo-protein is valuable. Other ophthalmologists, however, have shown that a definite flare-up in chest or bone lesions can be produced by the continual use of tuberculin. It should be considered as a dangerous procedure and one that should be used cautiously. Frequently in a busy ophthalmological practice, pa-

tients with a uveitis are given tuberculin by the nurse and are rarely examined by the ophthalmologist.

Of recent years *Brucella* infections have been considered as a cause of uveitis. In a recent review of the literature on brucellosis, I was unable to find a single instance in which any of the *Brucella* organisms had ever been isolated from the eye. In the United States, general infections of melitensis are comparatively rare as compared to the abortus or suis strains. In a rural population, such as in Iowa, there is a large percentage of the population who have been infected with one of these three organisms at some time during their lives. Most medical men find it difficult to make an absolute diagnosis of undulant fever unless they are able to recover the organism from some part of the body.

Most physicians are acquainted with the fact that many individuals carry a moderately high agglutination to the organism between 1:40 and 1:320. Many of these individuals have a strongly positive skin test to brucellergen or the sensitizing protein of the organism. Here, as in tuberculosis, the uveitis is almost always of the granulomatous type. There are many descriptions in the literature in which a serious iritis may be associated with a brucellar infection, and a large number of cases have been reported in which there is optic nerve and retinal involvement. It may be that no bacteria can actually be recovered from these eyes since they are completely attenuated by the presence of local immunity, and that the disease may be entirely due to the allergy to the proteins contained in the organism. This is difficult to prove in a given individual without being able to produce the definite flare-up in the eye by the distant injection of the sensitizing material. Ophthalmologists are usually not willing to produce an inflammation in an eye in order to arrive at a presumptive diagnosis.

I have been interested in brucellosis as the possible etiology of uveitis for a number of years, and have considered it on a number of occasions as being undoubtedly the cause of several cases of chorioretinitis and anterior granulomatous iritis. I recently made a survey of all of the ophthalmologists in the Eye Institute in New York, asking them if they had ever seen a case of brucellosis of the eye. Without exception, they stated that they had never seen such a case. This is a bit discouraging because in New York we see a fair number of patients with blood agglutinations of from 1:40 to 1:320, and certainly about 30 per cent of the population has a strongly positive skin test. I was interested in noting also

that Vermont has the largest number of cases of brucellosis in the country, and many of our patients come from New England. The treatment of undulant fever has been unsatisfactory to date. At the present time, it is probably best treated with streptomycin since these organisms are quite sensitive to this drug. If the eye lesion is produced by an allergic reaction to the organism, then desensitizing the individual would be indicated. Here, as in tuberculin treatment of tuberculosis, many cases have been treated with brucellar extracts. There have been a fair number of cases reported in which these extracts have been useful in treating uveitis, and on theoretical grounds it would appear that it would not only desensitize the individual, but also increase his immunity as measured by the opsonocytaphagic index. It is not uncommon that there is no improvement in the clinical appearance of the eye during the use of brucellar extracts. When there is no improvement, one is suspicious that perhaps the original diagnosis was faulty. While I was in the Navy, we saw many cases of uveitis. Many of these had an associated positive skin test for Brucella, a negative tuberculin and an agglutination of Brucella antigen of 1:40. These patients were given a course of sulfadiazine for approximately two weeks and then started on brucellar vaccine, keeping the amount of local reaction at the site of injection to the lowest possible amount. I was disappointed in the results and never sure that the uveitis was caused by brucellosis.

The report of Drell, Miller and Bohnhoff⁵ on the experimental production of gonorrheal iritis in rabbits stated that it was primarily an acute fibrocellular reaction and had a tendency to become chronic provided the lens was injured. They gave an excellent review of the literature and cited numerous cases in which the gonococcus had been either isolated or found in sections of eyes removed because of uveitis. In several of these patients, the differential diagnosis between gonococci and meningococci could not be made. It would seem that the incidence of gonorrheal iritis and uveitis must be extremely low if it is an endogenous infection. If the patients had had a previous gonorrhea and subsequently developed iritis, it is certainly presumptive that the etiology is probably the gonococcus. There are, however, many thousand more cases of gonococcal infection than there are infections in the uveal tract from gonorrhea. Clinically it has been considered that the dense fibrinous types of acute iridocyclitis were suspiciously gonorrheal in origin. This type almost always responds readily to fever therapy and usually clears up without any sequela. It is

doubtful whether there are many cases of chronic uveitis produced by the gonococcus.

Harada's disease is a uveitis associated with a meningeal encephalitis. There is considerable confusion in the literature between Harada's disease and the type of uveitis associated with alopecia, vitiligo and deafness. The two diseases are similar in many respects, and in two cases of Harada's disease seen recently, vitiligo developed. The uveitis begins as a granulomatous type, and subsequently develops complete bilateral retinal detachment. Meningeal signs are present, and loss of hearing and signs of encephalitis may be prominent. The spinal fluid contains many lymphocytes and an increase in the protein; the gold curve is not particularly abnormal. The protein may, however, rise very high, and in some of the cases described a pedicle may form. In our two cases, however, no pedicle formed even though the protein was elevated. The spinal fluid was sterile in the cases seen, and the material was inoculated into tissue culture, intracerebrally in mice and intravitreously in rabbits, with no success. The animals were followed for about two months and did not develop signs or symptoms. The disease seems to run a course, and the meningeal encephalitis improves; there may be, however, some permanent damage to the eighth nerve, resulting in some loss of hearing. The uveitis heals spontaneously, leaving the folds and pigimentary areas so commonly seen in spontaneous reattachments. The residual may be minimal or it may be severe. Usually the mental processes are somewhat slowed, and the vision may be decreased. A few cases have been reported, particularly those of Rados⁶ in Newark, in which the vision returned to 20/40. Since the disease is self-limited and runs a course like most acute infectious diseases, one would suspect that an etiologic agent might be isolated. It was reported by some of the Japanese workers that a virus-like agent could be transmitted to the vitreous of rabbits; however, I was unable to substantiate these claims from our cases. Another interesting feature is that in the cases we have had the patients have all had some close contact with persons who had spent a good deal of time in Japan. As far as I have been able to find, there has been no confirmation of the isolation of the infectious agent. Very few cases have been studied experimentally.

Uveitis is one of our most important diseases. There have been literally thousands of publications about various types of uveitis. Because of this confusion, numerous experimental studies

have been attempted. These studies are progressing along two lines: first, the bacterial allergy, and, second, an attempt to isolate a filterable virus.

During the past two years considerable investigation has been carried on in our laboratories in an effort to determine the etiology for a number of types of uveitis. I regret that there are only negative results to report, but perhaps some of our investigations may be of value to others doing similar work.

With Mrs. Alexander, I have investigated about twenty cases of various types of uveitis, most of which were the plastic variety and a few of which were granulomatous. The aqueous was removed from both eyes of cases with uveitis and inoculated either directly intracerebrally in mice or into fluid tissue cultures. In no case has the aqueous contained an infectious agent capable of producing an encephalitis in mice or after a period of growth in fluid tissue culture and inoculation into the eyes of mice or rabbits, were we able to demonstrate any infectious agent. From these studies and from information obtained from the literature, it has been deduced that the aqueous probably contains the highest concentration of antibody titer in the eye. If this is true, any infectious agent present in the aqueous would be completely neutralized by the antibody. With this in mind, we investigated five eyes that had been enucleated because of complications of uveitis. The eyes were frozen and opened under sterile conditions, and part of the iris and ciliary body was removed. This material was ground and placed in fluid tissue culture, which was allowed to grow for approximately three days in the incubator. The material was then inoculated intracerebrally in mice, guinea pigs and rabbits. To date, the results of these investigations have been entirely negative.

Although there are a large number of possible etiologic agents in uveitis, probably the first is the so-called bacterial allergy. This may cause its damage either by the so-called Schwartzman's phenomenon or by the release of histamine in the uveal tract. If the uvea is sensitized to a particular antigen and further antigen is carried to this high vascular tissue, then one can postulate that an inflammation like Schwartzman's phenomenon will develop.

Working on gonococci, Sanders⁷ had considerable difficulty in demonstrating Schwartzman's

phenomenon in the eye, particularly in the uvea, and his work has never been substantiated. Several authors have injected horse serum into the eye and later intravenously produced a typical uveitis, which is certainly suggestive of an antigen antibody reaction. The sensitization to horse serum, however, brings up a great many possibilities, particularly the release of histamine and the antigen antibody reaction which is so prominent in all allergic states. It is certainly highly suggestive that bacterial sensitizations as well as allergies play an important part in the production of uveitis. If the bacterial allergins are important, then perhaps it might be feasible to use many of the new antibiotics in treatment of uveitis in an effort to eliminate the offending bacteria from the body, much the same as foci of infection are eliminated. The elimination of allergins has been considerably more difficult, but this has been the basis for the use of pyribenzamine, benadryl and other similar drugs in the treatment of uveitis, particularly sympathetic uveitis.

In our hands, none of the antibiotics and, thus far, none of the antihistamine agents have been effective in the treatment of uveitis. The old standby, intravenous typhoid, is still the treatment of choice. As for a direct invasion of the uveal tract, this probably occurs, but if this were the case, one would suspect that the ordinary type of uveitis would be self-limited and leave no appreciable residual infection unless perhaps a bacterial hypersensitivity takes place. As far as viruses are concerned, any of them may play some part in the causation of uveitis. It is well known that there is frequently a uveitis associated with a herpes simplex of the cornea; likewise, when herpes zoster involves the cornea, there is almost always an associated inflammation of the uveal tract. This is not necessarily secondary to the corneal lesion since there may be corneal involvement with either of these two viruses with no associated inflammation of the iris or ciliary body.

BIBLIOGRAPHY

1. Woods, A. C.: Focal infection. *Am. J. Ophth.*, xxv:1423-1444 (December) 1942; also, *Virginia M. Monthly*, lxi:652-668 (December) 1942.
2. Woods, A. C. and Guyton, J. S.: Role of sarcoidosis and of brucellosis in uveitis. *Arch. Ophth.*, xxxi:469-480 (June) 1944.
3. Anderson, J. R.: Treatment and prognosis of sympathetic ophthalmia. *Tr. Ophth. Soc. Australia* (1940), ii:54-62 (1941).
4. Woods, A. C. and Burky, E. L.: Experimental studies of ocular tuberculosis; study of increased resistance to reinoculation after recovery from ocular tuberculosis shown by the immune-allergic rabbit. *Arch. Ophth.*, xxxi:413-422 (May) 1944.
5. Drell, M. J., Miller, C. P. and Bohnhoff, M.: Gonorrheal iritis; experimental production in the rabbit. *Arch. Ophth.*, xxxviii:221-242 (August) 1947.
6. Rados, A.: Bilateral uveitis with associated detachment of retina. *Arch. Ophth.*, xxvi:543-552 (October) 1941.
7. Sanders, T. E.: Ocular Schwartzman phenomenon. *Am. J. Ophth.*, xxii:1071-1082 (October) 1939.

SEROUS OTITIS MEDIA

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Acute exudation of fluid is one of the more common conditions affecting the middle ear, although the condition is frequently overlooked or neglected. It most certainly is not a new condition and has been mentioned in all books of otology. However, even though the condition is frequently encountered, for years the subject remained almost dormant except for brief references in publications concerned chiefly with chronic progressive deafness. Recently an increasing interest in the condition has been manifested by the appearance of several excellent publications. One wonders if this is only renewed interest in an old disease, or whether there is actually an increase in the number of cases observed either because of an absolute increase in the disease or because of more careful diagnosis. No ear condition deserves more careful scrutiny than serous otitis media because it is the fundamental disease responsible for chronic adhesive conditions affecting the middle ear.¹ Failure to be cognizant of the condition can lead to dire results as far as the patient is concerned—not immediately, but during the ensuing months and years. Because of the importance of serous otitis media as the chief causative factor in chronic conductive deafness, I want to re-emphasize a condition that if recognized and treated will prevent at least a few of the ear cripples who so frequently consult us for relief. Little attention has been devoted to the incidence of serous otitis media in early childhood; however, the apparent low incidence is probably because of poor cooperation in examination, history and resistance to treatment by the child. However, I am of the opinion that serous otitis media is just as common a middle ear condition in childhood as it is in later life.

Several types of serous otitis media may be described according to pathology and etiology. It is necessary that the otologist decide rather promptly with what type of disease he is contending so that he may deal intelligently with the condition. In general, anything that directly or indirectly interferes with the normal aeration and drainage of mucoid secretion of the middle ear through the eustachian tube is potentially capable of producing serous otitis media. However, we well know that not all obstructions of the eustachian tube are followed by the appearance of fluid in the middle ear so other factors must be involved, probably of a physicochemical or viral

nature, that allow serum to escape from the tissues of the middle ear more readily than usual.

Most frequently inflammatory conditions of the nose and nasopharynx are the most consistent etiologic causes. Of great importance is the presence of adenoid tissue in the nasopharynx and especially the presence of lymphoid masses in and about the orifice of the eustachian tube. The significance of this lymphoid tissue surrounding the tube is well known to all of us, particularly in the production of conductive deafness in children, through the efforts of Crowe, Fisher, etc. Sinusitis, tonsillitis and pharyngitis can at times be found as the inflammatory cause. Neoplasms of the nose and nasopharynx, structural abnormalities of the eustachian tubes or upper respiratory tract and dental malocclusion may produce the condition. Trauma, especially acute barotrauma, was particularly important during the past few years of the last war. Metabolic disorders, which can easily be overlooked, are at times the basic cause. Allergic conditions are most important. Thus Watson² inquires, "Why could not many of the exudative recurring forms of mild so-called middle ear catarrh be nothing but the allergic transudation of fluids loaded with colloids, amino acids, etc., through abnormally permeable capillaries? The middle ear is nothing more than a nasal sinus devoted to a special purpose." Dean,³ in discussing allergies of the ear, stated that it is impossible to make a diagnosis of allergic otitis without finding eosinophiles in ear secretions. Hoople⁴ found that of 748 cases 68 were considered to be allergic in origin, but he did not explain how the diagnosis was made and did not mention the finding of eosinophiles in the middle ear secretions. Thus, allergic conditions may be factors in the disease, but actual proof is often lacking. In my experience, I have encountered only one case that I felt was definitely allergic and in which eosinophiles were demonstrated in the middle ear secretion.

Since the appearance of the sulfonamides and antibiotics, a unique type of serous otitis media has been created. We can readily visualize the early onset of an acute otitis media in which virulent organisms have migrated up the eustachian tube and into the middle ear. The resulting inflammatory changes will cause an exudation of the fluid which ordinarily would be infected and will produce the characteristic findings of an acute suppurative otitis media. However, today the course of the disease is considerably altered. In many cases, the fluid never becomes purulent but remains as a sterile exudate. Many are prone to rely entirely on chemotherapeutics and biothera-

peutics and to forget the pathology that exists in spite of these measures. Thus I am sure in a number of instances the fluid is undiscovered or disregarded; the otologist, being lulled into a false sense of security by the apparent decline in the patient's symptoms, may be puzzled by the failure of the patient's hearing to return to normal.

I will not dwell lengthily on the pathology of this disease except to emphasize a few points of importance. One is prone to consider the condition as a mild catarrhal inflammation of the eustachian tube and middle ear, but it also can involve the mastoid, antrum and cells.⁵ This involvement of the mastoid area accounts for the rapid reappearance of fluid in some cases after having been expelled from the middle ear. Mastoid x-rays may at times show haziness of the cells.

Milligan⁶ pointed out that the most noticeable changes in the mucosa occur where it is the thickest and where its glands are the most numerous. These areas are in the eustachian tube and its middle ear orifice, and it is in these areas where stenosis is most apt to occur. The hypotympanum acts as a reservoir for a certain amount of residual secretion which is out of sight. This secretion, which acts as a foreign body, exerts a gentle but continuous irritating action on the mucosa of the hypotympanum which reacts with the production of an organized connective tissue which would necessarily affect the tympanic orifice of the eustachian tube. I feel that this is of great importance, and one should energetically continue to treat the condition until one is completely satisfied that the entire tympanic cavity is clear of secretion. Failure to secure complete regression may eventually produce various degrees of stenosis of the eustachian tube or may interfere with the normal conducting mechanism.

The symptom complex produced by serous otitis media is quite characteristic and when present is diagnostic. In the large majority of cases, there is an antecedent history of an upper respiratory infection of varying severity, which may at times have been so mild as to escape the attention of the patient. The patient complains of one or both ears feeling stuffy or blocked-up for a period of time ranging from a few days to several weeks or months. The ear or ears will feel full, and at times there will be a sensation of bubbles or fluid in the ears, especially when the head is tilted forward, back or sideways, with recurrence of the stopped-up sensation when normal position is resumed. However, when the middle ear is full of fluid, obviously this cannot be demonstrated. The patient hears himself talk-

ing in his ear; they usually state, "like talking inside a barrel." There is slight if any pain, but most complain of a peculiar tinnitus of a high-singing type. Mild vertigo occurs in some patients. A sensation of numbness or dullness over the entire side of the head, especially above and behind the ear, is frequently experienced. The most characteristic and striking symptom is the profound loss of hearing, which varies with the amount of fluid present.

Given the characteristic history of a mild cold, blocked-up ears, etc., the diagnosis is almost self-evident and offers no difficulties for the experienced otologist. The appearance of the drum may be perplexing to the inexperienced because of its quite normal appearance in the face of a severe hearing loss. A few of the vessels of the drum may be dilated, especially posterior and parallel to the long process of the malleus. Some degree of retraction is frequently present, but at times the position appears to be normal. In the textbook case, the drum shows a peculiar salmon yellow color, and a fluid line is visible as a dark line. If the fluid level rises above the lower level of the long process of the malleus, there is usually a double meniscus present, anterior and posterior to the long handle. The types of fluid level that may be seen are many and varied, depending on the amount of fluid and air present, the viscosity of the fluid and the degree of retraction of the drum. Air bubbles may be seen in or above the fluid, particularly if the patient has done a lot of snuffing or blowing of his nose. Obviously, if the middle ear is full of fluid, no fluid line can be seen. A constant finding is motion of the fluid with change in position of the head. Middle ear inflation is at times necessary before the characteristic fluid motion can be seen, particularly with the tympanum about full of fluid. With a pneumatic otoscope, one can cause changes in the fluid level by changing the position of the drum. In the majority of cases, these characteristic features are easily observed and demonstrated. Occasionally one encounters a patient with a drum thickened to such an extent that detection of fluid is impossible. One occasionally sees also a case where the fluid is present in such a small quantity as to escape detection in the hypotympanum. It is these patients who are at times puzzling to the physician because of the apparent lack of diagnostic findings. If one will insert a pneumatic otoscope and watch the drum carefully while the middle ear is inflated, the fluid can at times be visualized as a spray on the drum, much as one would see when water is thrown on the outside of an opaque

window. Also, inflation will produce a "wet" sound with which we are all familiar. The hearing is also usually markedly improved with inflation.

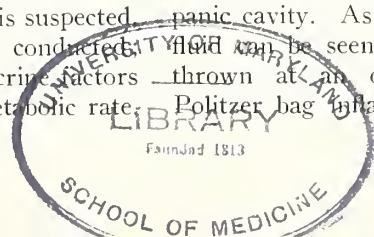
Treatment of acute serous otitis media is directed toward the restoration of normal nasal and tubal physiology so that normal ventilation and drainage may take place. A certain percentage of cases undoubtedly clear up spontaneously without recourse to medical care so the apparent incidence of the disease may be much higher than existing data would indicate. Also, there is undoubtedly another group of cases in which the condition subsides only partially but sufficiently enough to satisfy the requirements of the individual who accepts the slight alteration in hearing as adequate. It is this group of cases who swell the ranks of the hard-of-hearing and later seek the help of the otologist. We are all familiar with the patient with a conductive deafness of gradual onset, usually associating its inception with an upper respiratory infection. We all know that usually little can be done for such a patient. This class of patients will always be with us because I know of no cure for such inattention or callousness of individuals.

There is the third group of patients who present themselves reasonably early in their disease with whom we are especially concerned. Several authors have remarked that they felt that treatment in the past has been too conservative, and that unwittingly we have pushed the patient into the "calloused" group who, after failing to secure relief in a reasonable length of time, gradually submit to the yoke of decreased auditory acuity and become indifferent to their condition.

One may roughly divide cases of serous otitis media into two main groups: a large group that has as its etiologic factor inflammatory conditions of the upper respiratory tract, and a much smaller group in whom the disorder is caused by conditions of a noninflammatory nature. To intelligently treat the condition, a rapid appraisal of the causative factors in each case must be accomplished early before irreparable damage has occurred in the middle ear and eustachian tube. Not only should the coexisting pathology be eradicated or improved, but the underlying systemic causes of both local and regional pathology should be treated. If a definite inflammatory or obstructive condition cannot be assigned as the underlying cause, a diligent search should ensue to rule out other factors. If an allergy is suspected, a complete allergic survey should be conducted. If this should prove to be fruitless, endocrine factors should be considered, and a basal metabolic rate,

a determination of the blood cholesterol and a sugar tolerance test should be done. One should recall also that the basal metabolic rate may be low in allergic conditions.

Measures for relief of the accumulation of fluid in the middle ear can usually be instituted at once, except in a rare instance where the acuteness of the nasopharyngeal inflammatory process precludes active treatment of the ear. Inflation of the eustachian tube by means of a Politzer bag will usually clear the ear of secretion, especially in early cases with only a small amount of fluid. In the presence of a rather active nasopharyngeal infection, one is frequently a bit reluctant to introduce air in the middle ear. I feel that valuable time has been lost by waiting for subsidence of the infection, and believe that inflation is without any appreciable danger if one is careful first to clear the nasopharynx completely of infected secretions. With proper attention to nasal hygiene, the average early mild case will respond rather promptly after one or two inflations. This type of case is, however, in the minority. In the great majority of cases, a dramatic response to these simple measures is not to be expected. These cases usually have larger amounts of fluid, or the process has been present for some period of time. Simple measures are usually of no avail, and it is this type of case that demands a myringotomy. Many otologists have a natural reluctance to incise a tympanic membrane which appears rather normal, and it is this reluctance that leads to dire results. I feel that myringotomy in serous otitis media is just as important a part of rational treatment as it is in acute suppurative conditions. With ordinary asepsis, one need not fear introducing infection into the tympanic cavity. No anesthesia is necessary as incision through an uninfamed tympanic membrane causes only slight discomfort. The incision need only be a little larger than a stab incision, which is usually of sufficient size to facilitate removal of all the fluid. This is followed by Politzer bag inflation, the fluid bubbling out through the incision. In some cases, a thin stream of yellowish liquid drips from the ear canal. Inflation is continued until the ear is clear of fluid. I have found the Siegle otoscope invaluable for this determination; with the enlarged view, one can observe during inflation whether the fluid is all removed or whether inflation is merely scattering it through the tympanic cavity. As has been mentioned before, the fluid can be seen much as one would see water thrown at an opaque window. Occasionally, Politzer bag inflation will fail; in such cases, a



catheter should be gently introduced into the tube, and inflation done per catheter. Bougienage has been suggested by a few, but it is mentioned only to be condemned. Rather than resort to bougienage, I have used with success a procedure that will increase temporarily the patency of the eustachian tube to permit evacuation of the fluid from the middle ear. A cartridge was devised that could be filled with cotton impregnated with some type of volatile vasoconstrictor, such as tuaminate sulfate or amphetamine. At either end of the cartridge are openings, one of which is connected by thin rubber tubing to a eustachian catheter and the other to a source of air pressure, either from a hand bulb or some other source. When the tip of the catheter is inserted into the orifice of the eustachian tube, air saturated with the vasoconstrictor can be gently blown into the tube and middle ear. At times, a viscid fluid is encountered that will not pass through the incision. A helpful procedure, modified from that suggested by Shahinian,⁷ is to insert a closely fitting Siegle otoscope into the ear canal; the air hose is connected to a vacuum pump, and by this means a gentle suction can be applied while Politzer bag inflation is done. Several have suggested inserting a small suction tip through the incision. I have found this too painful for the ordinary patient. This same type of treatment is usual for children, and only occasionally will one need to resort to an anesthetic to perform the myringotomy. The myringotomy incision heals very rapidly. Rapid resolution of the process and a dramatic return of normal hearing will follow in the ordinary case. Occasionally a return of the fluid will necessitate a second and a third myringotomy. One should observe these patients frequently until one is certain that there has been a complete return to normal.

A procedure that I have found to be useful is the use of the Siegel otoscope and suction, which has been referred to earlier in this paper; this is particularly applicable to those cases in which the tympanic membrane remains retracted after successful inflation—the retraction usually is in the lower half of the drum. This resistance of the drum to inflation is probably due to beginning organization of fluid in the hypotympanum or hypotympanic cells. By means of the use of gentle suction and tubal inflation, one can usually prevent the drum from becoming adherent to the promontory. I believe the procedure to be of value in the treatment of all cases as it insures against hypotympanic adhesions.

Rarely, one will encounter a very recalcitrant condition where the fluid reaccumulates in spite

of all therapy. Cody⁵ and others have described such cases and advised that mastoidectomy be performed in the belief that the mastoid cells act as a reservoir for the fluid. I have not had any such case with which to contend. In these recurrent cases, special attention should be paid to the nasopharynx in regard to the presence of infected adenoid remnants or lymphoid tissue in and about the orifice of the eustachian tube. If present, they should be dealt with by surgery or irradiation of the nasopharynx.

I wish to briefly review a few cases of serous otitis media of varying etiology:

Case 1.—A male, aged 4, who had tonsils and adenoids removed two years ago, had decreased hearing in his left ear for two months following a cold. Otoscopic findings were typical of serous otitis media. Repeated inflations, etc., failed to prevent recurrence of the fluid. Radium applied to the tube, 11½ minutes on two occasions, brought complete resolution.

Case 2.—A male, aged 32, had decreased hearing in his right ear for past three years with no ascribable cause. Otoscopic examination revealed a normal drum except for thickening. Hearing loss was of conductive type, averaging 35 decibels for all tones. The eustachian tube was inflated with some difficulty, and a few bubbles were seen behind the tympanic membrane. Myringotomy was performed, a few drops of thick yellowish fluid escaping. Hearing returned to normal rapidly. It is surprising that the condition which was probably present for three years had not produced any permanent pathology in the tympanic cavity. This patient has been followed closely for the past year and a half with no recurrence.

Case 3.—A male, aged 22, had a history of perennial vasomotor rhinitis for several years with accentuation of symptoms during the ragweed season. His left ear had felt plugged-up for past three weeks. Findings were typical of left serous otitis media. Allergic survey showed sensitivity to house dust, feathers and ragweeds. Rhinoscopy revealed a rather severe allergic rhinitis, and the nasal secretions were loaded with eosinophiles. Coseasonal titration treatment of the hay fever was begun with an anti-dust and anti-feather regime. Nasal symptoms rapidly improved, but fluid continued to recur in the middle ear. Myringotomy was performed, a thin watery-type discharge escaping. This discharge showed the presence of a moderate number of eosinophiles. A second myringotomy was necessary later.

Case 4.—A female, aged 53, had a slow pro-

gressive loss of hearing in both ears for past six months. She also had recurrent attacks of mild hoarseness, and had experienced a general feeling of lassitude for the past year. Examination revealed a small amount of fluid in both ears. The larynx showed mild diffuse thickness of the vocal cords. Basal metabolic rate was -42, with an elevated blood cholesterol. Correction of the hypothyroid condition produced a spontaneous resolution of the serous otitis media.

Summary and Conclusions

1. Serous otitis media is probably more common than is generally supposed, and is particularly important as the cause of chronic conductive deafness.

2. Serous otitis media is probably much more common in childhood than we have heretofore supposed.

3. The etiology, pathology and diagnosis have been discussed.

4. Treatment is directed toward the underlying cause. Myringotomy is necessary in some cases and should not be unduly delayed.

5. Adequate treatment and follow-up of cases of serous otitis media is essential if we are to reduce the incidence of chronic adhesive conditions of the middle ear and eustachian tube.

Discussion

Cecil C. Jones, M.D., Des Moines: Dr. Carpenter is to be commended for presenting a paper revealing such a full comprehension of serous otitis media. It is appropriate because its objective is to direct attention to the prevention of chronic adhesive otitis media.

Numerous articles have been written relative to the control of suppurative otitis media and the prevention of its complications by employing the antibiotics. However, it is evident from the literature and from personal experience that cases have not been followed long enough after apparent resolution to determine if normal hearing has been restored throughout the tonal range.

The hearing loss may be either one of three types: low tone loss, high tone loss or a general diminution throughout the entire tonal range. Many of these aural conditions occur in individuals too young to measure their hearing loss with any degree of satisfaction or accuracy. This necessitates an accurate interpretation of drum findings.

Preventive medicine demands that exudates or transudates in the middle ear be drained if subsequent adhesive processes in the tympanic cavity are to be prevented. The management will vary with the etiology; in the allergic cases, elimination of the allergens; in infectious cases, avoidance of forcing infection into the ears by blowing the nose; in those cases due to tubal obstruction, removal of the adenoids, followed later by radium or x-ray therapy if necessary. It is my opinion that too many adenoidec-

tomies are inadequate because they are incomplete; one properly executed requires direct vision, employing a pillar retractor.

The spectacular role of the antibiotics in allaying the toxic manifestations, complications and prolonged course of intra-aural infections has resulted in the pendulum swinging a trifle too far in the direction of conservatism. Moreover, many acute ears are never observed by an otologist. I agree with the author that when fluid accumulates in the middle ear which cannot be evacuated through the eustachian tube a paracentesis is indicated, followed by politzerization, then suction, and capillary wick drainage.

BIBLIOGRAPHY

1. Mackenzie, G. W.: Diagnosis and treatment of acute exudative catarrh of middle ear. *Eye, Ear, Nose & Throat Monthly*, vii:249-256 (June) 1928.
2. Watson, J. A.: Allergy in the field of ophthalmology and otolaryngology. *Minnesota Med.*, xvi:390-396 (June) 1933.
3. Dean, L. W.; Agar, J. S., and Linton, L. D.: Allergic diseases of ear. *Laryngoscope*, xlvii:707-728 (October) 1937.
4. Hoople, G. D., and Blaisdell, I. H.: Some clinical observations on acute catarrhal otitis media. *Proc. Roy. Soc. Med.*, xxxvii:270-274 (April) 1944.
5. Cody, C. C., Jr.: Acute catarrhal mastoiditis. *Texas State J. Med.*, xxxvii:233-236 (July) 1941.
6. Milligan, W.: Chronic catarrhal otitis media. *Proc. Roy. Soc. Med.*, (Sect. Otol.) xiv:2 (January) 1921.
7. Shahinian, L.: Fluid in middle ear. *Arch. Otolaryng.*, xxxviii:328-337 (October) 1943.

A POSSIBLE NEW THERAPY FOR ACRODYNIA

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Being only too well aware of the unknown etiology of acrodynia and the multitudinous forms of therapy which have been tried for this condition, this report is being presented, not with the idea that it is the last word in treatment since one case in medical experience means nothing, but with the idea that the therapy used may be a possible adjuvant in the therapy of acrodynia.

In the excellent article by Bilderback¹ on acrodynia in Brennemann's Practice of Pediatrics, the epidemiology, symptoms and physical findings are so well outlined that time will not be taken here to go through them.

The child to be reported is a 13 month old female, second child of intelligent and relatively financially secure parents, residing in a small rural town. Her birth, past feeding and developmental history were well within normal. Her present complaints began about the age of 12 months, during the winter, when she was supposed to have had oral thrush, which did not respond to gentian violet or neoarsphenamine. About a week after initiation of treatment for thrush, it was noted that she became extremely cross and refused to stand, which she had been doing well for the past four months. It was also noted that her hands and feet had become quite red, and for the three days previous to having been seen, they

¹Presented at the Ninety-seventh Annual Session, Iowa State Medical Society, Des Moines, April 18-21, 1948.

had peeled some. A week previous to this, she had had a mild generalized rash, lasting for 36 hours, which was thought to be a heat rash. For the past two weeks, she had perspired so profusely that it had been necessary to change her bed completely two or three times a night and her clothes several times during the day. During the same time, there had been marked anorexia. She had exhibited no photophobia but had been extremely restless, acted as if she were in pain, would sleep or sit in a jack-knife position, and when awake would pound her head on the floor so vigorously that the mother had become scared. Also, she would rub her legs and thighs so hard that they became excoriated.

The salient positive physical findings were, when seen: temperature, 100.2 F.; weight, 19 pounds 3 ounces; blood pressure, 112/66. She was an irritable, fretful white female with an extremely querulous cry. The tip of the nose, the hands, wrists, ankles and feet had a high pinkish tinge, the intensity of which faded proximally. The skin of the whole body was extremely dry. The muscles were very flabby and of extremely poor tone. There was marked hypermobility and hypermotility of all the joints, so much so that the legs could be easily laid parallel to the torso. The tips of the fingers and the toes showed much fine flaking desquamation. There were no petechiae anywhere on the body. The remainder of the physical examination was within normal range except for the following outstanding findings: gums were fiery red and spongy; there were several thrush lesions on the right buccal mucosa. Teeth were 6/6 and firmly placed. The abdominal musculature was very weak, and the tip of the spleen was just felt. Complete neurological examination was within normal except that all of the tendon jerks were extremely sluggish. There was a striking generalized "shotty" lymphadenopathy.

On hospital admission, laboratory work-up showed: 11.4 gm., hemoglobin; 4,450,000 red blood count; 17,000, white blood count; 62 per cent polymorphonuclear; 34 per cent lymphocytes; 4 per cent myelocytes, with normal peroxidase stain. Blood chemistry showed: creatinine, 1.35 mg.; serum protein, 6.35 gm.; an albumin-globulin ratio of 4.12 to 2.13; calcium, 10.6 mg.; phosphorus, 4.9 mg.; vitamin C, .2; and vitamin A, 60. Blood serology was negative. Urine showed 1 plus albumin, occasional red and white blood corpuscles and occasional coarse granular cast. Spinal fluid was clear with total protein, 25 mg.; sugar, 110 gm.; chloride, 720; cells 3, all mononuclears. Culture was negative; spinal fluid serol-

ogy was negative. X-ray of long bones showed few fine transverse bands, suggestive of growth arrest.

In about 1937, since I had been personally and intimately connected with the apparent miraculous and successful use of crude liver extract in the treatment of a severe case of acrodynia, the child being reported was given the same therapy, reinforced with large doses of Vitamin C and an adequate high protein diet. For the first five days of the child's stay in the hospital, her clinical picture and physical findings remained essentially the same as when originally seen, and with the exception of the blood ascorbic acid, which had risen in four days to 1.4, her laboratory findings were essentially the same. Being well aware of Hay's² report of 12 cases of complete recovery with Vitamin B₁ therapy and Fisher's³ reported success with the use of crude liver, as well as my own apparent success with the latter, this case appeared to be making no progress. Aware of the relationship of folic acid to the Vitamin B complex, it was decided from a purely inquisitive standpoint to try treatment of this child with 15 mg. of folic acid parenterally only. Either because of, or in spite of this, the afternoon following the second day of injections, she was found standing up in bed, her blood pressure had fallen to 90/60, and for the first time since admission to the hospital she ate relatively well without being forced and did not resist examination. This form of therapy, with large doses of Vitamin C, was continued through her subsequent ten days' stay in the hospital and on alternate days for two weeks after being discharged. At time of discharge from the hospital, examination of the child was within normal; urine findings were normal; serum protein remained in the same range as on admission, but the Vitamin A level had risen to 93. Two months after discharge, or at 19 months of age, the child began to talk. She had moderately severe chickenpox in December 1947, and when last seen in March 1948, was a vigorous, active, alert, intelligent white female, who obviously had a good disposition, weighing 27¾ pounds, measuring 34½ inches high, and showing blood pressure of 90/66. The physical examination then was completely within normal range.

One needs only to have seen several of these cases and to have read the literature to know how difficult it is to evaluate the efficacy or lack of it of any one therapeutic procedure (as many of even the more severe cases appear to clear up without any specific therapy). And to add to the confusion of the whole picture, early this

year [1948], three cases of acrodynia were reported⁴ as supposedly due to mercury poisoning with rather prompt recovery when treated by BAL. With all this well in mind, this case is being reported not with the idea that folic acid is the treatment par excellence for acrodynia, but as a plea that it may be tried in some cases in order to accurately evaluate it as a therapeutic means for this potentially severe, depressing and agonizing disease entity.

BIBLIOGRAPHY

1. Bilderback, J. B.: Acrodynia. Brennemann's Practice of Pediatrics, Vol. 4, Chapter 20, 1948.
2. Hay, J. D.: Pink disease treated by intramuscular Vitamin B₁: report of 8 cases. Practitioner, cxlvi:264-270 (April) 1941.
3. Fisher, T. N.: Pink disease; review of 65 cases. British M.J., i:251-253 (February) 1947.
4. Bivings, L. and Lewis, G.: Acrodynia. J. Pediat., xxxii:63-65 (January) 1948.

SPINAL CORD TUMOR: REPORT OF A CASE

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This case is presented not because of the rarity of spinal cord tumors in the practice of pediatrics, but because of the difficulty in arriving at a correct diagnosis.

R. K., a three year old girl, entered the hospital on Aug. 13, 1947, with the main complaints of backache, difficulty and pain on lying down, unsteady gait and profuse perspiration at night. The past history was negative except for a fall suffered the preceding March when she fell down stairs, striking her back but without suffering any apparent injuries. From March until the end of July she was well, but at that time she began to complain of pain in the lower back. At night she would cry, saying it hurt to lie down. A few days later it was noted by the family physician that her neck was stiff on flexion, her gait was unsteady, the left leg was weak and she would fall frequently. At this time she was admitted to St. Luke's Hospital.

Tuberculous meningitis was suspected, and our search was directed along this line. However, an intradermal tuberculin test was negative. On admission to the hospital, physical examination revealed rigidity of the neck and spasm of the back muscles on flexion. The left leg was flaccid; however, the patellar reflexes were normal. Kernig's sign was positive on the left. Babinski's reflex was negative bilaterally. There was an unsustained ankle clonus on both sides.

A lumbar puncture was done. The spinal fluid, barely dripping out, was almost orange

in color and contained 200 cells, all of which were lymphocytes. The culture and Kolmer test of the fluid were negative. The white blood count was 8,400. X-ray of the skull and spine at this time were negative. Routine agglutination test of the blood, in the meantime, was reported from the State University Laboratory as being positive for brucellosis in a dilution of 1:160. A routine testing of the small herd of milk cows from which milk was obtained found two reactors to brucellosis.

Because of the progressive downward course of the patient during this first week in the hospital, manifested chiefly by increased rigidity of the neck, inability to sit up in bed and complete motor and sensory paralysis of the left leg, neurological consultation was sought. In this consultation two diagnoses were primarily considered: first, the possibility of a spinal cord tumor, and second, brucellosis meningitis. It was advised that the latter be considered as the more likely diagnosis since the x-ray failed to demonstrate spinal cord tumor, because of the positive test for brucellosis and the yellow spinal fluid which is characteristic of brucellosis meningitis. The patient was treated with streptomycin and sulfadiazine. Course in the hospital was afebrile.

She was discharged from the hospital on September 9, apparently improved, able to sit up in bed and with the rigidity of the neck decreased, but she was still unable to move her legs. During the following two months at home, she became incontinent of bladder and bowels. She never was able to move her legs; however, she could sit up and roll over. Early in November she pulled her left leg up to her head and in so doing fractured the left femur without any sensation of pain. She was readmitted to St. Luke's Hospital.

X-ray examination of the left femur revealed no evidence of tumor at the site of the fracture. On this admission, the child again had rigidity of the neck and flaccid paralysis of both legs. Complete sensory loss from the seventh dorsal vertebra on down was found. For the first time, a soft mass was felt just left of the tenth and eleventh dorsal vertebrae. This was approximately 3 cm. in diameter and about 1 cm. elevated. Supposedly it had developed within the past month. Needling of the mass failed to yield any pus or fluid. X-ray examination showed a sharply defined area of increased density around the eighth to eleventh dorsal vertebrae, suggesting a cold abscess. No bone destruction was seen. Laboratory studies failed to give positive agglutinations for brucellosis at this time. The pa-

tient was treated for a week with streptomycin, and then transferred to the neurological service of Dr. Sahs at the University Hospital at Iowa City. There, a working diagnosis was made of an expanding, granulomatous or neoplastic lesion in the area of the seventh to tenth dorsal vertebrae with compression of the cord. Brucellosis was believed to be the most likely cause; however, agglutinations were again negative. Spinal fluid cultures and guinea pig inoculations eventually proved to be negative for brucellosis and tuberculosis.

Dr. Russell Meyers, neurosurgeon at the State University Hospital, saw the patient and made a diagnosis of a space-occupying lesion from without the spinal canal through the intervertebral spaces of dorsals 8, 9 and 10 on the left side,

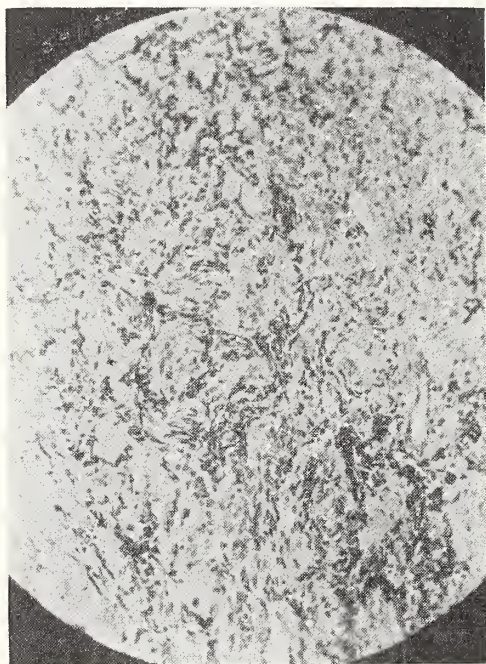


Fig. 1.

implicating the epidural tissues. He suspected an epidural granuloma of pyogenic origin. Differential diagnostic considerations included, among others, Hodgkin's disease, a lymphomatous tumor, brucellosis and tuberculosis.

Under nitrous oxide and rectal pentothal sodium anesthesia, a laminectomy was performed with partial decompression of the cord and removal of some tumor tissue. Granulomatous-like material was encountered in the region of the eighth to tenth dorsal vertebrae. Biopsy was taken, and frozen sections revealed an undifferentiated neoplasm. Laminectomy of the seventh to eleventh dorsal vertebrae was done; a bluish mass was found and there was complete absence

of the ligamentum flavum. The tumor mass was dispersed between various nerve roots, making complete extirpation impossible. Below the seventh dorsal vertebra, the cord did not pulsate.

The complete pathologic report, obtained later, showed that the tissue proved to be a highly cellular tumor. (Fig. 1.) The cells were large with scanty protoplasm and large vesicular nuclei, and were lying in a fine, fibrillar stroma. They showed no definite pattern, but extreme anaplasia. Considerable amount of hemorrhage into the tissues was seen. The tumor cells were lacking any differentiating features which would serve to identify them. Final diagnosis was: undifferentiated, wildly growing, malignant neoplasm, originating from meninges or cord.

Subsequently the patient received a total of 2,000 roentgens over the spine. The tumorous elevation on the back disappeared, but no improvement in paralysis or sensation took place. She had a progressively down-hill course until she expired on April 10, 1948.

College of Medicine
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CLINICOPATHOLOGIC
CONFERENCE
December 8, 1948

Summary of Clinical Record

This 49 year old single male, who was an ex-painter, was admitted to the University Hospitals on Aug. 19, 1948 and died on Sept. 2, 1948. He complained of swelling of the ankles for six weeks, with swelling up to the hips for the last three weeks, shortness of breath with exertion for five or six years and deformity of all joints for 23 years. He had worked until February 1948, and was ambulant, although with marked difficulty, up to the time of admission. The exertional dyspnea was subjectively related to walking. Six weeks before admission the swelling of the feet produced difficulty in wearing shoes. Three weeks later the right leg began to swell, and the edema involved both legs and the buttocks during the week preceding admission. Although there was no orthopnea, occasional paroxysms of cough awakened him at night. A chronic nonproductive cough had been present for many years.

He had not consulted a physician in the past 23 years because during a previous admission to the University Hospitals he was told that nothing could be done. Aspirin had been his only medi-

cation. There was a vague history of joint swelling in childhood and inability to keep up with others of his age group. There were no prolonged or febrile illnesses. He had frequent upper respiratory infections before and after tonsillectomy and adenoidectomy at the age of sixteen years. System's review was essentially negative aside from traumatic loss of vision of left eye, recently a gradual decrease in hearing acuity and nocturia two or three times for several years without dysuria. The consumption of alcohol had been limited to four to five bottles of beer a day.

Physical examination revealed an afebrile, chronically ill male with advanced deformity and stiffness of the joints of the hands, feet, jaw and spine with thoracic scoliosis to the right. All joints were involved to a variable extent. There were scattered excoriations of the skin, some isolated and ulcerated, some old and pigmented. There was extreme photophobia, but no gross retinopathy was seen. There was decreased luster with retraction of both ear drums. The teeth were carious, and there was moderate pallor of the buccal mucosa. The expansion of the chest was decreased but symmetrical. The percussion note over the lungs was resonant, and the diaphragms descended poorly. The breath sounds were distant with scattered moist rales in the right base. The left border of the heart was percussed 2 or 3 cm. outside the midclavicular line. There was a visible diffuse apical impulse in the fifth and sixth interspaces. The cardiac rhythm was normal at 100 beats per minute. A soft systolic murmur was heard throughout the precordium, loudest in the second right intercostal space. The blood pressure was 150/82. There was fullness of the abdomen with pronounced muscle guarding but no tenderness. The liver edge was not demonstrated. No other solid organs or masses were palpable. Moderate right costovertebral angle tenderness was noted. The penis and scrotum were edematous. The rectal tone was 80 per cent of normal; the prostate gland was negative, and there were no masses; the feces were brown and formed with a 2 plus reaction for occult blood. In addition to the deformities of the extremities, there was great pitting edema of the lower extremities extending up to a trace over the sacrum.

Urinalysis revealed 4 plus albumin, 1 plus sugar, 3 to 7 white blood cells per high power microscope field, and a specific gravity of 1.010. On admission the hemoglobin was 10 gm. per 100 ml., red blood cells 3.2 million per cu. mm., white blood cells 12,000 with a differential count

of 80 per cent segmented polymorphonuclears, 4 per cent eosinophils, 1 per cent basophil, 12 per cent lymphocytes and 3 per cent monocytes. A second examination five days later showed the hemoglobin to be 8.6 gm. per 100 ml., white blood count 12,850; sedimentation rate 139 mm. in 60 minutes (Westergren), hematocrit 26 per cent, prothrombin time 35 seconds with control of 26.4 seconds. The blood urea nitrogen was 41 mg., and creatinine 7.0 mg. per 100 ml. Total plasma proteins were 5.49 gm. per 100 ml. with an albumin-globulin ratio of 1.86 to 3.63. The van den Bergh reaction of the serum was 0.6 mg. direct. Cephalin flocculation was negative in 24 hours, 1 plus in 48 hours. Thymol turbidity was 12.2 units. Cholesterol was 313 mg. per 100 ml.; zinc sulfate 13.9 units; bromsulphalein 12 per cent with recovery in 30 minutes. Direct venous pressure was 4.5 cm. A Congo red test was followed by a severe shaking chill and a temperature of 103.6 F. There was no recovery for dye in the 4 minute specimen. (Some of the dye had been extravasated.) An

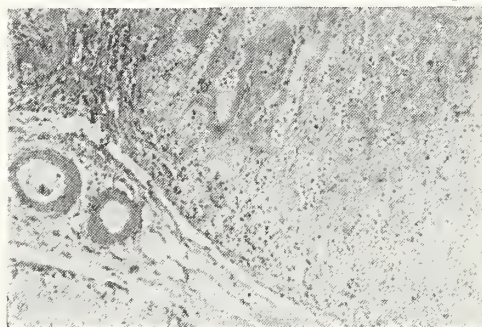


Fig. 1. Adrenal
(Note amyloid in vessels as well as in adrenal cortex.)

x-ray film of the chest revealed no abnormalities. Cardiac fluoroscopy revealed overactivity of the heart with severe left ventricular hypertrophy. An electrocardiogram was essentially normal. On the eleventh hospital day the blood urea nitrogen was 92 mg., and the creatinine 10.4 mg. per 100 ml. The albumin-globulin ratio of serum protein was 1.73 to 2.69. On the thirteenth hospital day the blood urea nitrogen was 108 mg., and the creatinine 10.4 mg. The CO_2 combining power of the plasma was 24 volumes per cent. The blood chlorides were 562 mg. per 100 ml.

On admission the patient was placed on partial bedrest and digitalized over a three day period. He was maintained on 0.2 mg. digitoxin daily. He received three 2 cc. injections of mercurhydrin. On this regime he lost 21 pounds during the first 10 days of hospitalization, and

there was only a trace of edema remaining. By the twelfth hospital day his diet was poorly taken because of increasing lethargy and anorexia without vomiting. Glucose 5 per cent was given intravenously and subcutaneously up to a total intake of about 3,000 cc., but the urinary output dropped to 200 to 250 cc. daily. - On the fourteenth hospital day he refused all fluids by mouth, and was given 1600 cc. of 1/6 M. sodium lactate solution.

The few rales which were present in the right base on admission had cleared. On the thirteenth day, scattered moist rales were noted in the left base, and the patient was afebrile. Respiration became labored, interrupted by frequent bouts of hiccups and muscular twitchings, which were unrelieved by the inhalation of carbon dioxide and the injection of magnesium sulfate. Irregularities of the pulse were noted the fourteenth day

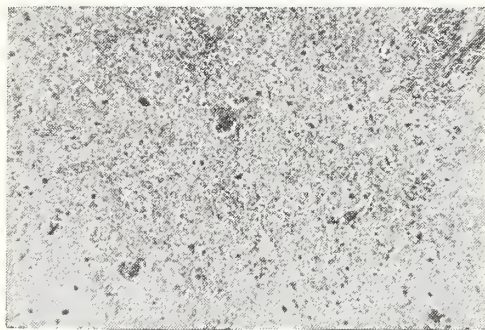


Fig. 2. Spleen.

with a rate of 80 per minute. The Cheyne-Stokes respiration was noted. The patient died at 1400 hours on the fifteenth hospital day.

Clinical Diagnosis

Dr. Walter L. Bierring (Des Moines): (Discussed without knowledge of pathologic findings.) I am much impressed by these two clinical sessions today because they represent a new trend in medical education.

At the first session a surgical patient with an acute febrile onset was discussed by several members of the clinical services, and in this clinico-pathologic conference a patient and the disease condition represented are considered from different points of view; it emphasizes the relationship in structure and function as well as pathologic changes of different tissues and organs to each other and to the organism as a whole.

A conference of this kind always places the first speaker at a certain disadvantage because he approaches the patient much as you do at the bedside, and the first conclusions must often be changed as special laboratory tests are developed

and as the clinical picture changes during the subsequent observation of the patient. Of course, in the exercises today the pathologist has the last word.

From the carefully prepared protocol by Dr. Taylor, we learn that the patient under consideration today was a 49 year old male, an ex-painter, admitted to the University Hospitals on Aug. 19, 1948, and deceased on Sept. 2, 1948. The principal entrance complaint was a swelling of the ankles for six weeks, the swelling of the feet causing difficulty in wearing shoes; three weeks later the right leg had begun to swell, and the edema had involved both legs, extending to the buttocks and waist line during the week preceding admission. A chronic deformative joint disease had existed for 23 years, with shortness of breath for the past six years. He was able to work until February 1948, and since then was ambulatory although with difficulty, the exertional dyspnea being subjectively related to walking. Although there was no orthopnea, occasional paroxysms of cough awakened him at night.

The patient had not consulted a physician in the past 23 years because at a previous admission to the University Hospitals he was told that nothing could be done for his arthritis; aspirin had been his only medication to relieve pain and stiffness. While the chronic deformative arthritis had evidently existed for 23 years, there was a vague history of joint swelling in childhood and inability to keep up with others of his age group. A multiple arthritis is usually regarded as an infectious process, and it is necessary to ascertain if previous infections may be related to it.

The protocol states there were no prolonged or febrile illnesses, although he had frequent upper respiratory infections before and after the removal of tonsils and adenoids at 16 years of age. He had sustained a traumatic loss of vision in the left eye and recently a gradual decrease in hearing acuity. For several years there had been a nocturia, two or three times, without dysuria. Regarding his habits, it is stated that the consumption of alcohol had been limited to four or five bottles of beer a day. I leave it to you whether this is a limitation or not.

The physical examination revealed an afebrile, chronically ill male with advanced deformity and stiffness of the joints of the hands, feet, jaw and spine, with thoracic scoliosis to the right. All joints were involved to a variable extent.

We can all visualize the clinical picture of a chronic rheumatoid arthritis, formerly called arth-

ritis deformans, with its irregular swellings of the involved joints, particularly of the wrists and ankles, the outward abduction of fingers and toes, all causing more or less disability. The arthritis of the temporomaxillary joint leads to a certain degree of ankylosis, causing difficulty in opening the mouth and in the mastication of food. This is one of the most distressing conditions met with in medical practice. No doubt, in this instance, the exertional dyspnea with walking could be attributed to the arthritic condition in the shoulder and vertebral joints; likewise, the reflected chest pains are often confused with the anginal syndrome of coronary disease. The skin revealed a marked pitting edema of the lower extremities extending above the hips; scattered excoriations of the skin were noted, some old and pigmented. There was extreme photophobia, but no gross retinopathy was seen. There was a decreased luster with retraction of both eardrums, which condition, no doubt, accounted for the decreased hearing acuity noted in the protocol. The teeth were carious, and there was a moderate pallor of the buccal mucosa. The expansion of the chest is described as decreased but symmetrical. The percussion note over the lungs was resonant, and the diaphragm descended poorly. The breath sounds were distinct with scattered moist rales in the right base. These findings would suggest a moderate degree of passive pulmonary congestion, incident to beginning heart failure.

The left border of the heart was percussed 2 to 3 cm. outside the midclavicular line. There was a visible diffuse apical impulse in the fifth and sixth intercostal spaces. The cardiac rhythm was normal at 100 beats per minute. A soft systolic murmur was heard throughout the precordium, loudest in the second right intercostal space. The blood pressure was systolic 150 mm. and diastolic 82 mm. From this single examination it can be concluded that the left heart was enlarged, the pulse pressure was increased, but a definite vascular hypertension was not present. The increased systolic pressure was probably incident to the enlarged left ventricle. The murmurs as heard over the precordium were suggestive of functional murmurs, yet, considered in connection with the enlarged left heart, could be connected with changes in the aorta and aortic valve. A later x-ray film of the chest revealed no abnormalities; cardiac fluoroscopy showed an overactivity of the heart with severe left ventricular hypertrophy. The electrocardiograms were essentially normal. The examination of the abdomen revealed fullness with pronounced mus-

cle guarding but no tenderness. The liver edge was not demonstrated, and no other solid organs or masses were palpable. A moderate right costovertebral angle tenderness was noted. The external genitals and scrotum were edematous. The rectal tone was 80 per cent of normal; the prostate gland was negative, and there were no masses; the feces were brown and formed with a 2 plus reaction for occult blood. Two laboratory examinations made on admission were significant: hemoglobin 10 gm. per 100 ml., red blood cells 3.2 million per cu. mm., white blood cells 12,000, with a differential count of 80 per cent segmented polymorphonuclears, 4 per cent eosinophils, 1 per cent basophil, 12 per cent lymphocytes and 3 per cent monocytes. There was a marked reduction in hemoglobin from the normal values of 14 to 16 gm., which with the lowered red blood cell count indicates an anemia of the hypochromic type, secondary to the chronic rheumatoid arthritis. A second examination five days later confirmed this conclusion, the hemoglobin being reduced to 8.6 gm. per 100 ml., white blood cell count being 12,850, sedimentation rate 139 mm. in 60 minutes (Westergren), hematocrit 26 per cent, and prothrombin time 35 seconds with control of 26.4 seconds. The moderate leukocytosis and increased sedimentation rate are a part of persistent rheumatoid arthritis. The first urinalysis revealed a 4 plus albumin, 1 plus sugar, 3 to 7 white blood cells per high power microscopic field and a specific gravity of 1.010.

Considering the extensive subcutaneous edema of the lower extremities, we first have in mind the principal form of edema as seen clinically. Edema of the ankles is often the first sign of cardiac failure, but as it extends it is usually accompanied by visceral congestion, which was not present in this patient. The edema of the ankles usually disappears during the night and is more marked the latter part of the day.

Ascites or hydroperitoneum is usually due to a disturbed portal circulation; it frequently accompanies cirrhosis of the liver. In this case ascites was not noted.

One of the early signs of acute nephritis of infectious origin is an edema of the face, principally a puffiness or swelling of the eyelids; this is most marked in the morning and often disappears during the day.

In this case the edema of the lower extremities can be regarded as due to renal insufficiency. The urinalysis indicates a high degree of albuminuria or proteinuria; a limited number of cells are noted in the microscopic field; there is an absence of cellular casts as well as free cells

and red blood cells in the sediment; casts appear to be absent, although with the large amount of albumin in the renal tubules cylindroids were probably present. These urinary findings do not support an inflammatory or infectious type of nephritis but rather a form of chronic nephrosis of noninflammatory origin. The other clinical signs do not support a diagnosis of chronic nephritis; vascular hypertension was not present.

In the blood chemistry examination made five days later, the blood urea nitrogen was 41 mg., and creatinine 7.0 mg. per 100 ml. Total plasma proteins were 5.49 gm. per 100 ml. with an albumin-globulin ratio of 1.86 to 3.63. The increase in the blood urea nitrogen and creatinine above normal values is a sign of renal insufficiency; the total plasma proteins were reduced, and the albumin-globulin ratio was the reverse of the normal, indicating proteinemia and retention of globulin. While further supportive of renal insufficiency, this reversal of the albumin-globulin ratio is not observed in the usual types of nephritis, but it is more significant in forms of nephroses due to chronic disease conditions such as amyloidosis and sarcoidosis.

The liver function tests carried out five days after admission gave some significant results: the van den Bergh reaction of the serum was 0.6 mg. direct; cephalin flocculation was negative in 24 hours, 1 plus in 48 hours; thymol turbidity was 12.2 units; cholesterol was 3.3 mm. per 100 ml.; zinc sulfate was 13.9 units, and bromsulphalein 12 per cent recovery in 30 minutes. All tests showed a marked variation from normal values and indicated severe liver damage.

Diseases of the liver in which functional tests are an aid in diagnosis are the different forms of cirrhosis, chronic passive congestion, multiple neoplasms, hepatitis, chronic degenerative processes such as extensive fatty degeneration and amyloidosis.

Reference has been made several times to amyloidosis in considering this case. In this connection I have a certain hesitancy in interpreting the results of the Congo red test made on the fifth day. In the test which consists of the intravenous injection of a 2 per cent solution of the dye, under normal conditions more than 60 per cent of the dye is retained in the serum after one hour. A more rapid removal of the dye from the blood serum is due to the affinity of the same for amyloid material, and the dye is taken up by it as it appears in different organs of the body. In the test there was no recovery of the dye in the four minute specimen, which was distinctly a positive result. However, it is

stated that some of the dye had been extravasated, which places some doubt on the result. The injection was followed by a severe shaking chill and temperature of 103.6 F. Because of the severe systemic reaction, the test was not repeated. Ordinarily, Congo red does not appear to have any toxic effects.

The Congo red test was first described by Bennhold in 1923, being based on the absorptive affinity of amyloid tissue from an intravital stain. Ever since, it has generally been accepted as a diagnostic for amyloidosis.

It may be asked why the diagnosis of amyloidosis is considered in the patient under discussion. Amyloidosis is a degenerative condition, the na-



Fig. 3. Kidney.

ture of which is not well understood even though it was recognized and given the name amyloid by Virchow nearly a hundred years ago. It is a homogeneous substance deposited in certain organs such as the kidney, liver, spleen, endocardium and intestines. Formerly it was associated with two definite conditions, i. e., chronic tuberculosis and chronic suppuration; it was most common in chronic tuberculosis of the osseous system and chronic osteomyelitis. Both of these disease conditions are rarely seen.

The association of amyloidosis with chronic rheumatoid arthritis has been reported only in recent years. An interesting article on this subject appeared in the July 1948 issue of the *American Journal of Medical Sciences* by Unger and associates, reporting 10 instances of the co-existence of these two disease conditions, four cases being postmortem studies and six being living cases.

It is possible that the extensive involvement of bone in general rheumatoid arthritis is a factor in producing amyloidosis.

When this patient was admitted to the hospital, it was recognized that he had a terminal illness, yet therapeutic measures were instituted to relieve certain distressing symptoms. On ad-

mission the patient was placed on partial bedrest and digitalized over a three day period. Following this he was given a maintenance dose of 0.2 mg. digitoxin daily. He also received three 2 cc. injections of mercurhydrin. On this regime he lost 21 pounds during the first ten days of hospitalization, and there was only a trace of edema remaining. The active diuresis resulting from this treatment, no doubt, was an active factor in removing the edematous condition. However, on the twelfth hospital day his diet was poorly taken because of increasing lethargy and anorexia without vomiting. Glucose 5 per cent was given intravenously and subcutaneously up to a total intake of about 3000 cc., but the urinary output dropped to 200 to 250 cc. daily. On the fourteenth day he refused all fluids by mouth; 1600 cc. of 1/6 M. sodium lactate solution was given. The retention phenomena, incident to renal insufficiency, also became more marked as the illness progressed. On the eleventh hospital day, the blood urea nitrogen was 92 mg., and the creatinine 10.4 mg. The CO₂ combining power of the plasma was 24 volumes per cent; the blood chlorides were 562 mg. per 100 ml. This increase of blood chlorides is suggestive of cerebral edema.

Further terminal changes are noted. On the thirteenth day, scattered moist rales were heard over the base of the left lung, and the patient was afebrile. Respiration became labored, interrupted by frequent bouts of hiccups and muscular twitchings, which were unrelieved by the inhalation of carbon dioxide and the injection of magnesium sulfate. Irregularities of the pulse were noted on the fourteenth day with a rate of 80 beats per minute. The Cheyne-Stokes respiration was frequent. The patient died at 1400 hours on the fifteenth hospital day.

Aside from the more marked symptoms of renal insufficiency, the anorexia, mental lethargy, labored respiration, Cheyne-Stokes breathing, muscular twitchings and hiccups were all indicative of a terminal uremic intoxication, which can be regarded as the cause of death.

After this summarized review of clinical symptoms, laboratory data and course of the patient's illness in the hospital, as presented by the protocol, we may arrive at the following diagnostic conclusions: chronic rheumatoid arthritis, severe hypochromic anemia, chronic nephrosis—amyloid kidney, amyloidosis of the liver and spleen, hypertrophy of the left ventricle, passive pulmonary congestion and terminal uremia—renal insufficiency.

Dr. E. Warner (Pathology): Dr. Gibson, could you clarify the stages in the Congo red test?

Dr. R. Gibson (Pathologic Chemistry): We take a four minute specimen as 100 per cent controlled. In my opinion, all of the Congo red had been put subcutaneously rather than intravenously.

Dr. H. Taylor (Medicine): I did not give it, but I thought that only a small amount was outside the vein.

Dr. E. Van Epps (Radiology): A chest film was taken of this patient the day following his admission to the hospital; it showed a smooth irregularity of the medial portion of the right leaf of the diaphragm. We see these not uncommonly, and attach no particular significance to them. In children these have been found to be associated with protrusion of a lobule of liver. The contour of the heart is that which we associate with left ventricular enlargement. The aortic knob is not particularly prominent, but is clearly visualized in this man of 46 or 47 years of age. There is some narrowing of the waist, and a gradual swing of the left border out to the cardiophrenic angle, but it does not reach the lateral chest wall. The pulmonary arterial radicals on each side do not appear to be unusually engorged. There are some markings extending into the bases, but again these are not considered to be of any great significance. We see them quite commonly in individuals of all ages, including children.

Upon fluoroscopy three days later, the findings were those seen on the film in the posterior-anterior projection. We noted that the aortic knob was prominent but not excessively expansile. The waist of the heart was narrow, and there was enlargement of the left ventricle. The pulmonary arteries were normal in size and density. The point of opposite pulsations was elevated, indicating a rotation of the heart on its axis due to an enlarged left ventricle. In the right anterior oblique there was a narrow left midsegment of the heart with no enlargement noted of the left auricle. In the left anterior oblique there was no right ventricular enlargement but prominent left ventricular enlargement. The aorta did not show any elongation or tortuosity.

In summary, the cardiac findings were those of left ventricular enlargement of rather significant degree without evidence of left auricular enlargement, pulmonary artery engorgement or elongation of the aorta. My impression, therefore, was significant left ventricular enlargement. This did not produce an increase of the Danzer Ratio above the accepted normal of 0.5 or below.

Marcy Sussman and one of his workers have reported several cases of amyloidosis occurring in patients with nonspecific enterocolitis. This condition also should be considered when thinking of a cause for amyloid deposits.

The Danzer Ratio is only one of several measurements of the heart that one uses to determine size. As noted here, it cannot be thought of as being accurate since it measures only one plane. This patient had significant left ventricular enlargement, which was not productive of a change of the Danzer Ratio from the accepted normal.

Dr. G. C. Albright (Iowa City): Is there any significance to the 1 plus sugar in the urine and then the administration of so much 5 per cent glucose on the twelfth day?

Dr. H. Taylor: One report that was not on the protocol was of the normal blood sugar determination. We did not feel that the man was a diabetic.

Necropsy Findings

There was ankylosis of the right elbow and right knee joints with a 10 degree flexion deformity of the right wrist. There was no edema or anasarca. The heart weighed 500 gm., and there was left ventricular hypertrophy. Calcified nodules and adhesions of the aortic valve were noted. The lower lobe of the right lung was completely consolidated; the basilar portion of the left lower lobe revealed patchy consolidation. The spleen weighed 500 gm., was very firm and on section had a smooth somewhat waxy appearance. The gastro-intestinal tract was virtually normal except for "spider" telangiectasias of the colonic mucosa. The liver weighed 2,450 gm. It was firm but of normal contour. On section the cut edges were very sharp, and the parenchyma presented a smooth glassy appearance. The adrenal glands were enlarged and very firm. On section the architectural pattern was distorted by masses of homogeneous waxy material. The kidneys were of normal size, but were considerably more firm than usual. The cortex was pale and firm in contrast to the red medulla. A few petechiae and scars were noted on the surfaces. The periaortic chain of lymph nodes was enlarged and soft. The brain weighed 1,750 gm. There was a large amount of fluid in the subarachnoid space.

Microscopically, the significant finding was amyloidosis involving the liver, spleen, kidneys and adrenals. The adrenal cortex in areas was almost completely replaced by amyloid. The glomeruli of the kidneys, as well as the vessels and interstitial tissue, contained large amounts of amyloid. The liver and spleen were involved to

a lesser extent, the amyloid being present primarily outside the endothelial lining of the blood vessels.

Renal insufficiency caused by the amyloidosis, bronchopneumonia and cardiac failure were the prime factors to which death was attributed.

Necropsy Diagnosis

Rheumatoid arthritis.

Amyloidosis involving kidneys, spleen, liver and adrenal glands.

Chronic rheumatic endocarditis, aortic valve, with insufficiency.

Cardiac hypertrophy.

Bronchopneumonia.

Dr. E. Warner: The pathologist has little to add to Dr. Bierring's and Dr. Van Epps' discussion of the probable findings. The evidence of the long-standing arthritis was manifest. Anatomically, this is a case of chronic rheumatoid arthritis with amyloidosis. The distribution is of the secondary amyloidosis type, that is, with extensive deposits in spleen, kidney and adrenal. The liver was only mildly involved in this particular case. This distribution is in contrast to focal depositions typically seen in the primary type of amyloidosis. Then we have a sclerotic aortic valve, which might well have interfered somewhat with the function of that valve, and a conspicuously hypertrophied left ventricle but without evidence of appreciable congestive heart failure. The man died finally with uremia and pneumonia.

Dean Mayo Soley: Was the heart involved at all?

Dr. E. Warner: No amyloid could be found in the heart. I neglected to say that the thyroid was rather generously infiltrated with amyloid.

Dr. Bierring: Well, I guess the Congo Red worked, although in such a short time it seems to me that it should have been seen grossly in the tissues. Was it?

Dr. Warner: Dr. Taylor, what was the interval between administration of the Congo red and the time of the autopsy?

Dr. Taylor: Approximately ten days.

Dr. Warner: If the Congo Red staining of amyloid was evident grossly, it was overlooked by the prosector.

Dr. Bierring: The atheroma of the aortic valve, leading to a certain amount of insufficiency, must have been of an infectious character, wouldn't you think, rather than arteriosclerotic?

Dr. Warner: This is one case of valvular sclerosis in which there was quite a bit to suggest that it was inflammatory. Not only were

there some inflammatory cells still present in the scar tissue in the valve, but there were adhesions between the valve cusps.

Dr. Bierring: Of course, the murmur would seem to indicate a stenosis of the valve opening rather than an insufficiency.

Dr. Warner: Well, I think it might well have interfered both ways. The large masses of calcium certainly would get in the way and might give some degree of stenosis. Also the valve might well have leaked, although apparently it didn't significantly.

Dr. Bierring: Atheroma of the aorta itself would produce a systolic murmur.

Dr. Warner: The aorta was not appreciably involved. Even down in the abdominal portion of the aorta, I should say there was surprisingly little atherosclerosis for the man's age.

Dr. W. Foxler (Medicine): It has been a distinct and rare privilege for all of us to hear Dr. Bierring's discussion of this case and to follow the line or lines of reasoning that such an excellent clinician takes in arriving at a diagnosis. He not only arrived at a correct diagnosis, but foretold what the pathologist would find, and went on with a dissertation on the causes of this condition. This leaves, so far as I can see, very little for me to add to this discussion. The case was one of amyloidosis of the secondary type, which is the most common type which we encounter. It is the type in which the parenchymatous organs are predominantly involved, with the liver showing the evidences of liver dysfunction, enlargement of the spleen and evidences of kidney involvement. In the early stage of renal involvement a severe albuminuria with little change in renal function occurs. A certain number of these will go on to the stage of renal insufficiency and uremia, just as we have seen in this particular case. This does not occur in the majority of these patients because they usually die of the primary condition before the renal pathology reaches this stage. As we see these patients on the medical service, a rather high percentage of them die in uremia because we see those cases that have progressed to the stage where the amyloidosis of the kidney overshadows the primary disease, and, consequently, uremia is not uncommon in our cases. Amyloid deposition is found in other parenchymatous organs, as was mentioned, the spleen, liver, kidneys, the thyroid in some of the cases with development of hypothyroidism and also in the adrenals where it leads to a condition very much like Addison's Disease. This secondary type of amyloidosis differs from the primary type for which we can find no pri-

mary cause. There is no suppuration, no arthritis or anything on which we can blame the amyloidosis. The deposition of the material in these cases has a somewhat different distribution in that it is more apt to be found in the mesenchymal structures. It is common in the tongue, skin, subcutaneous tissues and heart, and is much less apparent in the parenchymatous organs. There is a certain amount of overlapping, and we find certain of the secondary cases with skin and muscle involvement and some of the primary cases with involvement of the parenchymatous organs.

SUGGESTED CODE OF MINIMUM RELATIONSHIP

Between the Medical Profession, Hospitals and Press

In a code designed to guide the medical profession and the hospitals in their relationship with the press, the following considerations must be fundamental:

1. The primary obligation and responsibility of the physician and the hospital is the welfare of the patient.

2. That newspapers exist for the common good and function to bring matters of general interest to their readers quickly and correctly.

The foregoing are general principles. The following rules have been developed in specific instances:

Attending Physician—Hospitals should give the name of the attending physician to the newspaper when so requested. The newspaper shall not use the physician's name without his consent.

Private Cases—The presence of certain patients in a hospital is news. Their presence should generally be acknowledged by the hospital unless expressly forbidden by the patient or attending physician.

Emergency Cases—Certain items of public interest are a matter of police or fire department record and are available from these records. For such cases, the hospitals should promptly give the following information: name, age, address, occupation; nature of the accident—such as automobile, explosion, shooting, etc.; extent of injuries—such as fractures, burns, wounds, etc., and to what part of the body.

It is understood that pending complete prognosis, these statements may of necessity have to be hedged with "possible fractures," "condition apparently good, fair or serious," etc.

Deaths—The death of any patient is presumed to be public property. A statement that the patient has died should be made by the hospital. This is vital in such areas as Council Bluffs where local hospitals serve a large adjoining area.

These should be the minimum standards. Physicians and hospitals should keep in mind a news story can be no more accurate than the source of information.

STATE DEPARTMENT OF HEALTH

Walter L. Biering

1948 OUR FIRST YEAR WITHOUT SMALLPOX

The year 1948 saw Iowa added to the growing list of states reporting no cases of smallpox. One suspected case proved on investigation to be a severe case of chickenpox in a 24 year old adult. The reported cases for Iowa since 1930 show a dramatic decline to the base-line of zero for the disease. This same reduction is occurring throughout the United States. For example, the median number of cases for the United States for the period 1943-47 was 343. The number reported in 1947 was 168, and for the first 51 weeks of 1948 it stood at a new national low of 61 cases.

SMALLPOX IN IOWA 1930-1948

Year	Cases	Deaths
1930	3,044	5
1931	2,225	5
1932	1,171	1
1933	719	0
1934	166	1
1935	205	1
1936	749	9
1937	1,316	2
1938	1,170	6
1939	1,057	4
1940	412	2
1941	114	0
1942	25	0
1943	27	1
1944	34	0
1945	10	0
1946	15	0
1947	3	0
1948	0	0

We must not be lulled into a false sense of security and so let our vaccination and revaccination program be reduced. Iowa still has many communities with sufficient numbers of susceptible persons to permit smallpox to spread easily. As recently as during the last week of December, cases were reported in our neighboring states of Nebraska, South Dakota and North Dakota. Exposed susceptible persons might any day bring the disease into the state.

TYPHOID CULTURES ARE BEING TYPED

Recently a young woman developed typhoid fever in one of our southern counties. Typhoid bacilli were obtained from the specimens submitted to the state laboratories. Investigation for a source of infection was begun by asking members of the families to submit stool specimens. The patient's mother-in-law was thus found to be a typhoid carrier. Circumstantially it appeared that the mother-in-law must have been the source of the patient's infection. Cultures from both the case and the carrier were sent to the Public Health Laboratories where they were subjected to bacteriophage typing and were found to be of the same type, that is, susceptible to lytic action by the same type of bacteriophage. This procedure is to be carried out on all typhoid cultures obtained and will prove useful in confirming or denying epidemiologic evidence as to the possible relationship between cases and carriers. Thus if two cultures are typed "B," typing would substantiate the epidemiologic relationship between them. On the other hand, if one were found to be type "A" and the other type "B," the cases or carrier could not be related as to source or contact.

WE CHOOSE WISELY WHEN WE CHOOSE IOWA

The chart copied by permission from the Statistical Bulletin, Volume 29, September 1948, The Metropolitan Life Insurance Company, shows life is longest in the northwest central states. This data, obtained from the National Office of Vital Statistics of the Public Health Service, is in Iowa dependent partly upon such factors as our low infant and maternal death rates, our low tuberculosis death rates and our progress in public health engineering. It is influenced too by our high economic status and stability.

Fourth from the top is good, but is it good enough for Iowa?

EXPECTATION OF LIFE AND MORTALITY RATE PER 1,000 AMONG WHITE MALES AND WHITE
FEMALES, AT BIRTH AND AT AGE 40, IN EACH OF THE UNITED STATES, 1939-1941

STATE	EXPECTATION OF LIFE, YEARS				RANK BY EXPECTATION OF LIFE AT BIRTH		MORTALITY RATE PER 1,000			
	WHITE MALES		WHITE FEMALES				WHITE MALES		WHITE FEMALES	
	At Birth	Age 40	At Birth	Age 40	White Males	White Females	First Year of Life	Age 40	First Year of Life	Age 40
Nebraska.....	66.25	32.51	70.04	35.14	1	1	39.03	3.77	31.17	2.92
South Dakota.....	66.09	32.52	69.99	35.14	2	2	40.85	3.83	31.15	2.92
Minnesota.....	65.97	32.09	69.74	34.54	3	3	37.95	3.96	29.87	3.03
Iowa.....	65.81	32.18	69.70	34.89	4	4	41.86	3.97	32.13	2.99
North Dakota.....	65.71	32.38	69.31	34.60	5	7	46.73	3.73	37.25	2.62
Kansas.....	65.58	32.24	69.67	35.13	6	5	41.64	3.90	32.97	3.01
Wisconsin.....	65.22	31.54	68.75	33.88	7	9	41.44	4.08	32.37	3.21
Arkansas.....	64.24	32.01	67.96	34.81	8	18	47.83	4.93	39.64	3.80
Oregon.....	64.09	30.79	69.49	34.46	9	6	36.30	4.76	27.53	3.32
Connecticut.....	64.00	29.71	68.19	32.76	10	16	37.52	4.59	28.93	3.61
Oklahoma.....	63.87	31.69	68.32	34.93	11	13	50.85	4.78	40.74	3.49
Washington.....	63.62	30.51	68.95	34.03	12	8	40.09	5.02	28.32	3.54
Missouri.....	63.50	30.84	67.82	34.08	13	19	48.37	4.87	39.40	3.68
New Hampshire.....	63.48	30.09	67.54	33.18	14	22	44.31	4.68	40.07	3.74
Idaho.....	63.45	31.11	68.23	34.28	15	15	45.07	5.06	35.79	3.65
Michigan.....	63.45	30.25	67.36	32.89	16	25	44.76	4.69	34.94	3.69
Indiana.....	63.36	30.50	67.10	32.99	17	32	45.48	4.92	33.97	4.01
Delaware.....	63.33	29.79	67.32	32.89	18	28	41.69	4.54	34.13	3.51
Rhode Island.....	63.31	29.04	67.36	32.19	19	26	41.80	4.48	31.63	3.68
Massachusetts.....	63.25	29.30	67.62	32.55	20	21	41.22	5.19	31.53	3.58
Ohio.....	63.25	30.20	67.33	32.97	21	27	45.76	5.00	35.45	3.71
Utah.....	63.21	30.54	68.60	34.05	22	12	41.03	5.22	30.73	3.60
New Jersey.....	63.09	28.95	67.10	31.94	23	33	38.60	5.01	29.53	3.72
Vermont.....	63.05	30.07	66.99	32.95	24	36	49.60	4.62	39.17	4.06
Wyoming.....	62.90	30.60	68.09	34.20	25	17	45.86	4.72	36.57	3.62
New York.....	62.90	28.80	67.03	31.88	26	35	39.65	5.11	31.04	3.60
Illinois.....	62.86	29.38	67.46	32.72	27	23	39.50	5.39	30.30	3.66
UNITED STATES.....	62.81	30.03	67.29	33.25	28	29	48.12	5.13	37.89	3.68
Montana.....	62.69	30.14	67.69	33.80	29	20	43.51	5.46	36.45	3.79
Maine.....	62.62	30.63	66.44	33.12	30	40	59.46	4.40	45.08	3.63
Tennessee.....	62.48	30.81	66.76	33.76	31	38	55.63	5.53	43.60	4.04
Florida.....	62.39	30.21	68.65	35.20	32	11	48.95	5.84	41.31	3.47
North Carolina.....	62.32	30.26	67.28	33.62	33	30	56.54	5.31	44.01	3.70
Mississippi.....	62.26	30.43	67.17	33.75	34	31	53.48	5.06	42.63	3.80
Pennsylvania.....	62.20	29.02	66.24	31.92	35	44	47.19	5.37	37.44	4.01
District of Columbia.....	62.19	28.35	68.69	33.58	36	10	47.41	6.53	33.63	3.51
Maryland.....	62.00	28.71	66.86	32.42	37	37	45.97	5.66	36.87	3.51
California.....	61.90	29.00	68.27	34.13	38	14	43.52	6.15	34.87	3.77
Alabama.....	61.77	30.16	66.28	33.34	39	42	56.53	5.85	44.90	4.18
Georgia.....	61.72	29.52	67.46	33.98	40	24	54.42	5.66	42.78	3.99
West Virginia.....	61.71	30.78	66.00	33.33	41	46	60.83	5.94	48.61	4.55
Colorado.....	61.61	30.74	66.28	33.97	42	43	62.72	5.34	48.10	4.30
Kentucky.....	61.57	31.00	65.62	33.38	43	48	59.41	5.92	46.84	4.30
Virginia.....	61.28	29.71	66.73	33.31	44	39	58.39	5.63	45.83	3.63
Louisiana.....	61.18	28.89	67.09	33.21	45	34	52.07	5.67	41.23	3.57
Texas.....	61.07	30.60	65.96	34.55	46	47	68.22	5.29	55.84	3.93
South Carolina.....	60.01	28.50	66.12	33.02	47	45	61.46	6.38	47.89	4.10
Nevada.....	58.98	27.48	66.42	33.20	48	41	49.58	8.96	37.81	4.61
New Mexico.....	57.20	30.44	60.96	32.69	49	50	107.87	6.43	88.96	5.43
Arizona.....	56.83	27.93	63.74	33.58	50	49	82.62	8.63	66.74	5.15

TREND OF CERTAIN COMMUNICABLE DISEASES REPORTED IN IOWA

1941-1948

DISEASES	1948	1947	1946	1945	1944	1943	1942	1941
Chickenpox.....	3,600	3,007	1,895	2,472	2,151	2,985	3,393	3,293
Diphtheria.....	60	100	187	226	203	156	187	199
Encephalitis.....	23	32	10	5	9	10	15	129
Influenza.....	48	23,215	62	660	7,743	22,709	90	3,835
Malaria.....	12	24	281	465	241	16	2	0
Measles.....	10,151	4,627	4,288	1,279	5,552	5,903	6,612	5,167
Meningitis.....	65	62	94	82	109	88	9	9
Mumps.....	3,356	1,052	1,424	2,768	1,866	2,683	3,935	5,318
Pneumonia.....	116	143	2,289	2,031	629	641	1,287	1,664
Polioomyelitis.....	1,260	176	620	320	204	204	72	40
Rabies in Animals.....	38	36	57	69	64	30	44	49
Rabies in Man.....	0	0	0	0	1	0	0	0
Rocky Mountain Spotted Fever.....	3	4	2	2	3	4	14	14
Scarlet Fever.....	1,280	1,399	1,690	2,228	4,530	2,483	1,880	1,904
Septic Sore Throat.....	43	32	93	20	11	69	147	192
Smallpox.....	0	3	15	10	34	26	25	114
Trichiniasis (Trichinosis).....	9	0	0	0	0	0	0	0
Tularemia.....	4	7	3	5	1	5	16	31
Typhoid Fever.....	20	46	48	50	50	43	54	93
Undulant Fever.....	412	902	638	482	295	418	333	354
Whooping Cough.....	463	1,180	1,042	275	504	1,702	1,195	1,734

(Continued on page 77)

The JOURNAL of the Iowa State Medical Society

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Vol. XXXIX FEBRUARY, 1949 No. 2

Response to the AMA Assessment

The response so far given to the AMA assessment of \$25 per member is most heartening here in Iowa. In many counties, all who have paid their 1949 dues have also paid their assessment. Some counties have remitted the assessment even before paying the dues so that it might be transmitted to Chicago and be put to work.

As was stated in the January issue of the JOURNAL, this money is to be used in a public education campaign centered around three objectives:

1. To awaken the people to the danger of a politically controlled compulsory health insurance system.
2. To acquaint the people with the superior advantages of American medicine over the government-dominated systems of other countries.
3. To stimulate the growth of voluntary health insurance systems and prepaid medical care plans to take the economic shock out of illness and to increase the availability of medical care to the American people.

The planning committee held its second meeting January 8, and it is contemplated that state society secretaries may be called to Chicago in February to hear full details of the proposed program so that they may coordinate their own state programs with the national. Definite directives will probably be given to each state secretary at that time outlining how an effective program may be set up and activated.

It is encouraging to note that the planning committee is losing no time in getting under way.

Necessarily any plan must be thoroughly checked and double-checked to eliminate objectionable features, but it is hoped that by February 12 a working outline will be ready for the states. The committee deserves credit for accomplishing that much in the 60 days that have elapsed since the program was authorized.

It is also encouraging to note what seems to be an increase in public sentiment in favor of voluntary methods for providing medical care. One government "task force," the Hoover committee, cites the waste and duplication in governmental agencies in their health programs: Mr. Fulton Lewis, Jr., in a broadcast January 5 points out the dangers in compulsory systems and advocates support of voluntary plans; and Mr. George Sokolsky in his column upholds the right of American medicine to present its case, to mention only a few. It cannot be denied that the profession has been dilatory in presenting an effective educational program, but fortunately for all concerned, time has not yet run out; we have supporters for our viewpoint and we must gather more. Financially and educationally, it behooves us all to do our share.

Socialized Medicine in England

Recent press dispatches have appeared in newspapers in this country which give the impression that compulsory health insurance in England is proving satisfactory on the whole. This information would lead the average reader to believe that minor defects have appeared in this system of medical practice but that only slight modifications have been necessary to make socialized medicine workable.

However, the English publication, *Truth*, carried this statement in the December 10 issue:

"Evidence is multiplying on every side of the distress and suffering caused in the medical profession by the national health service [in England]. Doctors are overworked and underpaid, and many have severely suffered under the strain. A specialist writing to the *Daily Telegraph* describes how a colleague expressed the feeling to him: 'I used to love my work, but now I begin to hate it.' From the earliest times, and in Britain especially, medicine has been regarded by its practitioners as a labour of love. It is proof of the violence of the revolution effected by Mr. Bevin that services formerly given gladly and unsparingly are now, from sheer physical exhaustion, becoming forced and reluctant.

"Warned by the British example the Ameri-

can Medical Association is raising a fund of money from its 140,000 members to oppose any government-controlled health program. A nationwide campaign is contemplated to impress on the American public the 'advantage of the American system in securing a wide distribution of a high quality of medical care.' If any Americans remain unconvinced by the campaign, the fund should be used to pay the expenses of a deputation to visit Britain and see what state-controlled medicine means in practice. The report taken back to America would be more than sufficient to persuade doctors and patients alike stubbornly to resist any change in their relationship. Britain has been made the 'corpus vile' for one of the most disastrous experiments in nationalization, an experiment from which even the Communist rulers of many countries behind the iron curtain have shrunk."

American physicians may well take the time to ponder this evidence in considering the value of supporting the American Medical Association in its request for funds to combat socialized medicine.

The Woman's Auxiliary—A Useful Adjunct

It is hardly the place of the JOURNAL to publicize a musical play such as "Allegro," and yet physicians who are familiar with this Rodgers and Hammerstein production will probably agree that a physician's wife plays a very important rôle in his life. The song "A Fellow Needs a Girl—His Own Kind of Girl" epitomizes not only the individual's need for the right kind of wife, but possibly the profession's need for the right kind of Auxiliary. To carry the analogy further, physicians who are familiar with what our Woman's Auxiliary has accomplished will probably agree we have the right kind of wives and that they are doing exceedingly valuable work for us.

Last year the Auxiliary undertook the financial and personal responsibility for carrying on a nurse recruitment program and for making a survey of all nurses, registered and practical, in the state. This was done on request of the Iowa State Nurses' Association and approved by the Committee on Medical Service and Public Relations and the Board of Trustees.

With less than a quarter of the counties in the state having organized Auxiliaries, an immense amount of personal correspondence was necessary to procure a chairman and working personnel in all counties, but this was done. The recruitment program was directed to high school gradu-

ates and their parents, the purpose being to interest such girls in nursing careers. As a result, the increase in enrollment in nursing schools in Iowa is far above the national average, which itself shows an increase over 1946 and 1947. Credit for the increase is due to the Auxiliary.

Following the recruitment program, a survey of nursing personnel in each county was made, and here again the reports exceeded all expectations. The Nurses' Association now has a very good picture of how many registered nurses and how many practical nurses there are in the state and what percentage are working and what retired. This information should prove helpful during the present session of the legislature when it is hoped that a bill will be enacted to define nursing, to set out standards of training and to provide for licensure of both registered and practical nurses. This bill has the endorsement of the Iowa Interprofessional Association and will have the active support of the Auxiliary.

We as doctors know the need for more nurses in Iowa, but we lack the time to campaign actively for passage of this bill. Our wives can be very effective in explaining the bill and emphasizing the need for it.

Information has been sent to all Auxiliary members on proposed legislation which has been approved by the Iowa Interprofessional Association. Information also has been made available to them on compulsory versus voluntary methods of providing medical care. The American Medical Association will send them full details of its forthcoming educational campaign, and it is looking to them for active participation and support. We feel confident they will do an excellent job. On the basis of what the Auxiliary has done and what it is contemplating, it deserves a vote of thanks.

Iowa Heart Association

For the purpose of the study and control of heart disease, a group of Iowa physicians have recently organized the Iowa Heart Association, an affiliate of the American Heart Association. The worthiness and need of its purposes is well pointed up by the fact that 8,642 persons died from heart disease during 1947 in Iowa.

By means of scientific study, development of cardiac clinics, promotion of educational programs for both professional and lay groups, and the development of additional facilities for the care of patients, the Iowa Heart Association will strive to accomplish its worthy and ambitious program. However, the success of its objectives

requires that it first be established on a firm basis as an organization, and the realization by the individual physician of the need for his active interest and support is essential. It is such spontaneous organization by the medical profession which can most effectively combat the threat of the socialized medicine program.

Three types of memberships are available: (1) a \$5.00 Annual Membership which gives all the rights and privileges of the society, (2) a \$14.00 Journal Membership, limited to medical and allied professions, which entitles a member to a year's subscription to the *Journal of the American Heart Association*, and (3) a \$10.00 Contributing Membership for those desiring to give more substantial support to the membership fund or who do not wish to receive the *Journal of the A.H.A.* Checks should be sent to the Treasurer, Iowa Heart Association, 2124 Grand Avenue, Des Moines 12, Iowa.

The Care of Hand Injuries

The hand is particularly susceptible to the development of complications leading to various serious disabilities. The American Society for Surgery of the Hand and the American College of Surgeons are cooperating in an effort to remind all physicians of the necessity for special care of the freshly injured hand in order to prevent such complications as result from further infection, additional tissue damage and stiffening.

The first-aid treatment of hand injuries is directed fundamentally at protection, and until adequate facilities are available, all efforts at treatment by exploration and debridement or by repair of damaged structures should be avoided. Nothing should be put into the wound, such as instruments, gauze, applicators, sponges or any sort of antiseptic, but it should be covered immediately with a voluminous sterile dressing, which will protect against additional infection and the entrance of foreign material. It should be applied firmly with moderate pressure, separating the fingers from each other and maintaining the hand and fingers in the position of function. As protection against added tissue damage and deformity, the hand should be immobilized as soon as possible after receipt of injury. If areas around the covered wound are cleansed, soap and water only should be used.

Adequate facilities and equipment are necessary for proper treatment. Each hospital or clinic should have at least one surgeon who is thoroughly familiar with the anatomy and physiology of the

hand and is prepared to undertake the early treatment of its major injuries. Early definitive care first requires a thorough evaluation of the injury. Information should be obtained as to the time, place, causative agent and mechanism of the injury, and the nature and extent of the first treatment given. Determination should be made of the general nature of the wound, the degree and extent of surface injury, the source of major bleeding, and the infection status—whether the wound is relatively clean, grossly contaminated, or has established infection. Tendon or muscle damage should be evaluated by testing function against resistance, and nerve injury, by testing for motor and sensory function. The use of x-ray is indicated to determine the bone and joint injury and to discover and locate suspected opaque foreign bodies.

Treatment should be rendered under strictly aseptic conditions, preferably in an operating room, with careful adherence to aseptic technic in matter of scrubbing, draping, masking, and the use of gloves, and with an adequate supply of appropriate instruments, good lighting and sufficient assistance to assure good exposure. A bloodless field, by means of a pneumatic tourniquet or blood pressure cuff, and complete anesthesia for the patient, preferably general, should be provided.

With the wound protected, the entire hand and forearm should be shaved and scrubbed with soap and water, and then the immediate wound area thoroughly cleansed, preferably with soap and water or a bland detergent. Antiseptics should not be used in or on the wound. Additional incision, *closely paralleling natural creases*, may be necessary to assure adequate exposure. For the thorough toilet of the wound, all foreign matter should be removed, and all completely devitalized or grossly soiled tissue in the wound surfaces excised by sharp and careful dissection, exercising the greatest care to spare all tissues that may be viable, particularly skin, tendon, nerve and bone fragments. Major injured blood vessels should be ligated, assuring hemostasis. The uniting of divided digital nerves is important to future function, and injured nerves should be united end-to-end with fine interrupted perineural sutures. In clean wounds of short duration or in well-cleaned contaminated wounds of not over eight hours' duration, other soft tissue injuries should be repaired, but never in wounds with established infection. Fractures and dislocation should be reduced, and retention in the corrected position assured by traction or splinting in the position of function (position of grasp with wrist

in dorsiflexion). The protection dressing should be applied so the fingers are separated by gauze in the position of function. Flat splinting of the hand or any of its digits must be avoided at all times. Immobilization of the hand is required in any major injury whether the wound involves skin, tendons, nerves, joints or bones. Administer antibiotic drugs systemically, not locally, in full dosage. When the conditions warrant, tetanus antitoxin (or toxoid) may be administered.

Following treatment, the elevation and rest of the hand and noninterference with the initial dressing, unless evidence of suppuration develops, are necessary for a time sufficient to permit healing. At the earliest possible time, skin coverage of denuded areas should be restored. Partial-thickness skin grafting is a simple and valuable means of promoting early healing. Restoration of function, *by directed active motion*, is indicated for the nonaffected parts of the hand to the fullest extent that will not jeopardize healing, and for the affected parts as early as is consistent with the full healing and preservation of the repair of damaged structures.

NOTICE: PLEASE ACT PROMPTLY

Will the secretaries, or some representative, of the 48 Iowa county societies, whose medical histories have never been written, please send date of organization, names of charter members, personality sketches and other data available for publication to Dr. Clyde A. Henry, Farson, Iowa. You do not need to write a history at this time—just a brief sketch will be greatly appreciated for its historical value.

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Tuesday at 11:30 a.m.

WOI—Thursday at 11:15 a.m.

- Feb. 1-3 Venereal Diseases (Recording)
State Department of Health
- Feb. 8-10 Venereal Diseases (Recording)
State Department of Health
- Feb. 15-17 What Constitutes a Good Physical?
Atlee B. Hendricks, M.D., Iowa City
- Feb. 22-24 School for Handicapped Children
Raymond R. Rembolt, M.D., Iowa City

STATE DEPARTMENT OF HEALTH

(Continued from page 73)

Nineteen hundred and forty-eight was characterized by continued reduction of the communicable diseases for which we have effective immunization procedures. It marks our first year in Iowa without smallpox; over 50 per cent reduction in the number of whooping cough cases; and 40 per cent reduction in the number of diphtheria cases as compared with the previous year. Typhoid fever, largely through sanitary and epidemiologic procedures, has also been materially reduced.

Investigation has shown that none of the 12 reported cases of malaria obtained their infection within the state. Since the late part of the winter of 1947, few cases of influenza have been reported. Although influenza reporting in Iowa is never better than fragmentary, the low number of 48 cases reported in 1948 does indicate epidemic influenza has not appeared during the year.

MORBIDITY REPORT

DISEASE	Dec. '48	Nov. '48	Dec. '47	Most Cases Reported from:
Diphtheria	2	6	12	Black Hawk, Woodbury
Scarlet Fever	151	89	230	Dubuque, Linn, Polk, Story
Typhoid Fever	1	1	1	Jasper
Smallpox	0	0	1	
Measles	43	73	391	Cerro Gordo, Dubuque, Linn
Whooping Cough	28	21	70	Linn, Muscatine, Polk
Brucellosis	22	19	31	Scattered
Chickenpox	602	408	382	Boone, Dubuque, Linn, Story
German Measles	3	0	4	Buchanan, Cerro Gordo, Worth
Influenza	0	0	0	
Meningitis, Meng.	6	0	2	Scattered
Mumps	387	215	244	Black Hawk, Boone, Clinton, Dubuque
Pneumonia	8	12	3	Black Hawk, Boone, Polk
Poliomyelitis	108	134	3	Polk, Fayette, Cerro Gordo
Tuberculosis	65	60	52	For the state
Gonorrhea	103	75	72	For the state
Syphilis	171	112	167	For the state

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NEWS NOTES

from the

Committee on Medical Service and Public Relations

SOCIALIZED MEDICINE—A.M.A. EDUCATION PROGRAM

It is estimated by the best authorities that approximately 25 per cent of a worker's monthly income will be deducted for social security and withholding tax if a program of "socialized medicine" is enacted—about 10 per cent allotted for social security and 15 per cent for withholding tax. This deduction will represent the earned wage for two out of eight hours work each day.

Total cost for the first year of a socialized medicine program is predicted to be \$13,000,000,000, with approximately one-fourth of this amount to be paid to lay persons to administer the program. It is anticipated that one lay person will be needed per 1,000 citizens to operate this compulsory plan.

In every country where socialized medicine is in use today it has been the forerunner of governmental control of business.

There are now about 140,000 practicing physicians in this country. These men work all kinds of hours, seven days a week. Yet, if they were under Federal control, it is reasonable to assume that they, like all government employees, would work only 5-day, 40-hour weeks, with the office closed on all holidays—ground-hog day and all others. Deducting a two weeks' vacation each year, these physicians would devote approximately 2,000 hours a year to their profession—a total of about 280,000,000 hours for the 140,000 physicians.

The shortage of physicians will no longer exist under a program of compulsory insurance, so say the politicians. Isn't it the very nature of the majority of our American citizens to get the most for the least expended. Then why shouldn't we assume that if people are entitled to this so-called "free medicine" they will use it to its fullest extent. This will mean the doctors will be constantly pestered by neurotics, nostrum-takers and malingerers, who do not actually need medical care but who visit the doctor because

they have been assured this privilege by the government. This will naturally lessen the opportunities for the persons who are in need of medical care to get it and will increase the work of the doctors to the extent that it will create an even greater shortage of practicing physicians than now exists.

Americans when fully informed will choose the method of voluntary health insurance rather than the compulsory type proposed by some politicians to afford them greater control over our way of life.

Outline of the American Medical Association's proposed public education program:

1. To awaken the people to the danger of a politically controlled compulsory health insurance system.
2. To acquaint the people with the superior advantages of American Medicine over the government-dominated medical systems of other countries.
3. To stimulate the growth of voluntary health insurance systems and prepaid medical care plans to take the economic shock out of illness and increase the availability of medical care to the American people.
4. To challenge all false statements concerning medical care made by the proponents of compulsory health insurance.
5. To inform the public of attempts that are being made to solve problems in medical research, medical education, etc.
6. To encourage physician endorsement and participation in voluntary health insurance plans. Employer participation will also be encouraged.

All known publicity and public relations devices will be utilized to accomplish these ends. The above mentioned projects will be carried out through the cooperation of state and county medical societies.

Donald L. Taylor

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ANESTHESIA, PRINCIPLES AND PRACTICE—By Alice M. Hunt, R.N., Associate Professor of Anesthesia, Emeritus, Yale School of Medicine, New Haven, Conn. G. P. Putnam's Sons, New York, 1949. Price, \$2.60.

CLINICAL MANAGEMENT OF VARICOSE VEINS—By David Woolfolk Barrow, M.D., Lexington, Ky. Foreword by ARTHUR W. ALLEN, M.D., Boston, Mass. Paul B. Hoeber, Inc., Medical book department of Harper & Bros., New York, 1948. Price, \$5.00.

CONTROL OF PAIN IN CHILDBIRTH—By Clifford B. Lull, M.D., F.A.C.S., F.I.C.S., Director, Division of Obstetrics and Gynecology, Philadelphia Lying-in-Unit, Pennsylvania Hospital; and ROBERT A. HINGSON, M.D., F.I.C.S., F.A.C.A., F.I.C.A., Associate Professor of Obstetrics; Anesthesiologist, Department of Obstetrics, John Hopkins University and Hospital; Surgeon, U. S. Public Health Service. Introduction by NORRIS W. VAUX, M.D., Consulting Obstetrician and Gynecologist, Philadelphia Lying-in-Unit of Pennsylvania Hospital; Professor Emeritus of Obstetrics, Jefferson Memorial College. Third Edition, revised and enlarged. J. B. Lippincott Co., November, 1948. Price, \$12.00.

DIABETIC MANUAL FOR THE DOCTOR AND PATIENT—By Elliott P. Joslin, M.D., Sc.D., Clinical Professor of Medicine, Emeritus, Harvard Medical School; Medical Director, George F. Baker Clinic at New England Deaconess Hospital; Consulting Physician, Boston City Hospital, Boston, Mass. Eighth Edition. Lea & Febiger, Philadelphia, 1948. Price, \$2.50.

NEW AND NONOFFICIAL REMEDIES 1948—Issued under the Direction and Supervision of the Council on Pharmacy and Chemistry of the American Medical Association. J. B. Lippincott, October, 1948.

PHYSICIAN'S HANDBOOK—By John Warkentin, Phd., M.D., and JACK D. LANGE, M.S., M.D. Fifth Edition. University Medical Publishers, Palo Alto, California. Price, \$2.00.

PREMATURE INFANTS, A MANUAL FOR PHYSICIANS—By Ethel C. Dunham, M.D., Federal Security Agency, Social Security Administration, Children's Bureau, 1948. Price, \$1.25.

SHOCK AND ALLIED FORMS OF FAILURE OF THE CIRCULATION—By H. A. Davis, M.D., C.M., F.A.C.S., Associate Professor of Surgery, Graduate School of Medicine, College of Medical Evangelists, Los Angeles Division; Senior Attending Surgeon, Los Angeles County General Hospital and White Memorial Hospital; Visiting Surgeon, Cedars of Lebanon Hospital and California Hospital. Grune & Stratton, New York, 1949. Price, \$12.00.

THE 1948 YEAR BOOK OF GENERAL MEDICINE—Edited by Paul B. Beeson, M.D., J. Burns Amberson, M.D., George R. Minot, M.D., S.D., F.R.C.P. (Edinburgh and London), William B. Castle, M.D., S.M., M.D. (Hon.) Utrecht, Tinsley R. Harrison, M.D., and George B. Eusterman, M.D. The Year Book Publishers Inc., Chicago. Price, \$4.50.

BOOK REVIEWS

THE BATTLE OF THE CONSCIENCE

A Psychiatric Study of the Inner Working of the Conscience

By Edmund Bergler, M.D., Washington Institute of Medicine, Washington, D. C., 1948. Price, \$3.75.

In this book Dr. Bergler has attempted to explain his views concerning the relationship of the conscience and neurotic symptoms. He points out that everyone has neurotic tendencies, but not in everyone do they exist quantitatively to a degree to result in a neurosis. It has been mentioned in his previous writings, "every neurotic constantly repeats his unconscious patterns acquired in early childhood." The conflict which a neurotic shows in his problems in environmental adjustment are merely indications of more deeply seated personality problems.

"Normal persons" are able to redirect aggression away from themselves by other means—i.e., work, sublimation, rationalization and pathos. In so doing, a great deal of inner-guilt is absorbed. Such is not the case in the course of a neurosis.

Dr. Bergler describes in considerable detail the mechanics utilized by neurotics—cynicism, hypocrisy, self-derision, all of which are familiar to general practitioners as well as to the practicing psychiatrist.

Dr. Bergler stresses that "human conscience provides the unpredictable factor" in human conduct in the relationships of nations as well as of individuals.

J. H. P.

CORRELATIVE NEUROANATOMY

By Joseph J. McDonald, M.S., M.Sc.D., M.D.; JOSEPH G. CHUSID, A.B., M.D.; and JACK LANGE, M.S., M.D. Fourth edition, revised. University Medical Publishers, Palo Alto, Calif.

This manual is a revision of a previous similar publication, the third edition having been printed in November 1943. It is a comprehensive, concise and correlative handbook, which coordinates the anatomy, clinical neurological findings and the syndromes of the central, peripheral and sympathetic nervous systems.

The manual has been divided into three principal sections which are followed by a bibliography and index. The first section deals with the peripheral nerves, including the cranial and sympathetic systems, and is presented in such a manner as to include their anatomy, physiology and more common pathological involvements. The second section takes up the principles of neurodiagnosis, including special diagnostic methods such as spinal fluid examination, electro-encephalography, pneumo-encephalography and electrical examination of the muscles and nerves. The last and third section presents pathologic entities of the nervous system, including congenital defects, vascular disturbances, trauma, infection, neoplasms, degenerative diseases and epilepsy. Following the above material, many neurological signs and syndromes with their proper names and the findings in each are listed. This in turn is followed

by an outline for an extensive and thorough neurological examination.

Medical students, practitioners and those confining their work to the field of neurology and its allied specialties will find this work to be a handy, ready reference for rapidly refreshing the memory as well as presenting material in an outline manner that is the everyday equipment of those practicing medicine.

H. G. D.

ESSENTIALS OF PATHOLOGY

By Lawrence W. Smith, M.D., F.C.A.P., formerly Professor of Pathology, Temple University School of Medicine; Associate Professor of Pathology, Cornell University Medical School; and Assistant Professor of Pathology, Harvard Medical College; Corresponding Member of the Royal Flemish Medical Academy of Belgium; and EDWIN S. GAULT, M.D., F.C.A.P., Associate Professor of Pathology and Bacteriology, Temple University School of Medicine. With a foreword by the late JAMES EWING, M.D., Memorial Hospital, New York City. Third Edition. The Blakiston Co., Philadelphia, 1948. Price, \$12.00.

This third edition follows the same general outline of previous editions. It differs from other textbooks of pathology in that it contains an unusually large number of illustrations. These illustrations are of very good quality and consist for the most part of photomicrographs. Case histories are used to provide a clinicopathologic correlation of lesions which have just been described. An extensive bibliography is given in the back of the book rather than at the end of each chapter. The index is adequate. The book is easy to read and has been found very useful.

F. C. C.

NEUROANATOMY

By Fred A. Mettler, A.M., M.D., Ph.D., Associate Professor of Anatomy, College of Physicians and Surgeons, Columbia University, New York. Second Edition. The C. V. Mosby Company, St. Louis, 1948. Price, \$10.00.

This is the second edition of Mettler's *Neuroanatomy* and is a text primarily for the medical student beginning instruction in neuroanatomy. The new edition is very similar to the first one in the arrangement of the topics for discussion and in factual content. The primary difference is the author's discussion on the blood supply and on venous drainage of the various portions of the neuraxis. This new material is not easily available in English, and as the author states in his preface, "it should serve to aid students in the subsequent comprehension of the hematogenic infections and pathology of the neural system."

The text is divided into two sections: gross anatomy and microscopic anatomy. In the first part, the author presents the typography of the brain and spinal cord, meninges, the insular supply and the gross features found in microscopic sections. The drawings are excellent and give one a much better idea of the venous sinuses, cerebrospinal fluid, etc., than the usual texts. Diagrams of the connections of each of the cranial nerves are also very informative.

In the microscopic section, the functional viewpoint is stressed. There is no attempt made to give a full account of neurophysiology, but diagrams and many microscopic sections are used to advantage in giving the student an over-all concept of neuroanatomy. An interesting feature of the book is the use of bold face type for every new term used, usually succeeded by its BNA equivalent.

Good organization of material with a minimum of confusing opinions can be said to be the chief advantages, and as a reference book on neural pathways and connections it is very practical. By far the best feature is the excellent drawings, of which the majority were made from original dissections and present many new angles and views not usually given in the ordinary texts. Three dimensional views are common.

B. I. K.

PHYSIOLOGY OF EXERCISE

By Laurence E. Morehouse, Ph.D., Associate Professor of Physical Education, University of Southern California; formerly Research Fellow, Harvard Fatigue Laboratory; and AUGUSTUS T. MILLER, JR., Ph.D., Associate Professor of Physiology, University of North Carolina Medical School. The C. V. Mosby Company, St. Louis, 1948. Price, \$4.75.

In this book the physiology of man in sports, work and war is presented in simple language, which can be understood by those having an elementary knowledge of the basic principles of chemistry and physics. It contains a glossary explaining technical terms and well selected references to recent literature at the end of each chapter. There are six chapters devoted to the anatomy and physiology of skeletal muscles, and four chapters explaining the anatomy and physiology of the heart and its relation to the circulation and exercise. The anatomy and physiology of the respiratory system and its relation to the circulation and exercise is presented in four chapters. Other chapters are devoted to such subjects as strength, skill, training, endurance, fatigue and physical fitness. The chapters on the medical aspects of exercise and the relation of diet, drugs and hormones to exercise are very instructive. This book should be especially useful to directors of athletics and teachers of physical education.

F. W. M.

HANDBOOK OF OPHTHALMOLOGY

By Everett L. Goar, A.B., M.D., F.A.C.S.,
Professor of Ophthalmology, Baylor Uni-
versity College of Medicine, Houston, Texas.
The C. V. Mosby Co., St. Louis, 1948. Price,
\$5.50.

This short volume of ophthalmology is meant for the medical student to be used in connection with the lectures in ophthalmology. It gives a short comprehensive review of all the aspects of ophthalmology, but is quite limited in its scope and will not be of much help to the ophthalmologist or general practitioner. However, it seems to be adequate for its intended purpose.

H. H. G.

SYNOPSIS OF PEDIATRICS

By John Zahorsky, A.B., M.D., F.A.C.P.,
Professor of Pediatrics and Director of the
Department of Pediatrics, St. Louis Uni-
versity School of Medicine; Pediatrician-in-
Chief to the St. Mary's Group of Hospitals;
Fellow of the American Academy of Pedia-
trics; assisted by T. S. ZAHORSKY, B.S.,
M.D., Senior Instructor in Pediatrics, St.
Louis University School of Medicine; and
Assistant Pediatrician to the St. Mary's
Group of Hospitals. Fifth Edition. The
C. V. Mosby Company, 1948. Price, \$5.50.

To keep up with the numerous significant advances in pediatrics, the *Synopsis of Pediatrics* has once again been revised to reach its fifth edition since 1934. The revisions have consisted primarily of new therapeutic measures, particularly in the uses of new drugs. A brief discussion of toxoplasmosis and histoplasmosis has also been added to Chapter XXXI.

Unfortunate is its omission of such topics as fibrocystic disease of the pancreas, classification and diagnosis of congenital heart disease, present concepts of feeding the premature infant and a discussion of the administration of parenteral fluids according to present advances. The book will nonetheless be of value to the medical student and general practitioner for a ready reference to the subject of pediatrics.

H.H.C.

ROENTGEN STUDIES OF THE HEART
AND LUNGS

By Nils Westermark, M.D., Director of
Radiology, St. Goran's Hospital, Stockholm,
Sweden, Edited by LEO G. RIGLER, M.D.,
Professor of Radiology, University of Min-
nesota. The University of Minnesota Press,
Minneapolis, 1948. Price, \$7.00.

The book consists of a series of lectures delivered at the Center for Continuation Study, University of Minnesota, under the following subheads: I. Technical Factors in Roentgenography of the Chest; II. The Anatomical and Physiological Basis for the Roentgen Appearance of the Normal Lungs; III.

General Considerations of the Roentgen Findings in Pulmonary Disease; IV. The Importance of the Intra-Alveolar Pressure in the Diagnosis of Pulmonary Diseases; V. Roentgen Diagnosis of Pulmonary Emphysemas; VI. Roentgen Diagnosis of Bronchial Tuberculosis; VII. Roentgen Diagnosis of Primary Tumors of the Lung; VIII. Roentgen Diagnosis of Pulmonary Embolism; IX. Studies of the Circulation by Roentgen Cinematography.

Therein is presented an excellent integration of anatomy, physiology, pathology and clinical medicine in the interpretation of roentgen diagnostic procedure.

It is questionable if the application of intra-alveolar pressure is as simple or as easily applied as would appear from the author's description; however, there is no doubt great merit in this method.

The chapter on emphysema is excellent, and the author's studies on bronchial tuberculosis are classical.

The chapter on bronchogenic carcinoma brings up-to-date and summarizes contributions by the author over the past 10 years.

The lecture on embolism and infection calls attention to Westermarck's contribution, the concept of embolism without pulmonary infarction and its manifestation on the x-ray film.

The author's approach to the problem of disease of the heart and lungs is so broad that it should be of interest to all physicians, and all will be well rewarded by a careful reading.

F. A. S.

THE LIVER AND ITS DISEASES

Comprising the Lowell Lectures Delivered at Boston, Mass. in March, 1947, by H. P. HIMSWORTH, M.D., Professor of Medicine in the University of London; Director of the Medical Unit, University College Hospital, London; Fellow of the Royal College of Physicians of London; Fellow of University College, London. Harvard University Press, Cambridge, Mass., 1947. Price, \$5.00.

This is a small, refreshing book, chock-full of new concepts of the pathogenesis of liver disease. The author has done a lot of thinking about the problem of damaging agents and their effect on the liver, and gives us the benefit of his well digested concepts. He leads us through chapters on "Types of Liver Injury and Their Structural Consequences," "The Vascular Factor in Liver Injury," "Nutritional Factors in Liver Injury"—both experimental and human—"Noxious Factors Causing Liver Injury," "The Syndromes of Hepatic Failure," and several chapters on the "Clinical Classification of Liver Disease." The upshot of the whole book is that we are going to have to revise our ancient ideas about liver disease. This is the stuff from which text books of tomorrow are written. Let the reader beware, however; there is much meat to assimilate.

D. G. Jr.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. ALLAN G. FELTER, Van Meter

President-elect—MRS. CHARLES A. NICOLL, Panora

Secretary—MRS. CHARLES T. MAXWELL, Sioux City

Treasurer—MRS. M. A. ROYAL, 1138 Thirty-seventh Street, Des Moines 11

PERTINENT QUESTIONS

The Washington office of the A.M.A.'s Council on Medical Service reports on socialized medicine:

"Who would be the beneficiaries?" Advocates of health insurance invariably state that the government program would make health facilities available to all. The common impression is that a government health program would make medical facilities immediately available. This is misleading. In the first place, only those people can benefit who are enrolled under social security and the self-insurers, and not all of those who carry social security will be eligible. A study made by the House Ways and Means Committee of the Seventy-ninth Congress reported that less than 50 per cent of the persons carrying social security are eligible for benefits when they reach retiring age. It will be seen that only persons enrolled under social security can be eligible, and they must have been continuously enrolled for a period of a year a half prior to the time when they seek benefit. Loss of occupation or change of occupation will endanger eligibility.

"Is the scheme one of insurance or taxation?" If it were insurance, then the payments would in time have a cash value, and if a person ceased paying he would be entitled to a return of the unused portion of his premiums or an extension of his insurance. This, however, is not true under the proposed program. The annual contributions will have no cash value, and the coverage ceases immediately after the person discontinues payments.

"Will a national health program be expensive and will it be difficult to procure personnel?" Proponents admit that all of the facilities offered under the bill cannot be immediately available. There will not be enough doctors, nurses or hospital beds. It is also admitted that a deduction of 3 per cent from wages will probably not cover the entire expense. Great Britain's experience is showing the truthfulness of these admissions. Hospitals can be built and hospital beds provided in a reasonable time, but it takes years to train a nurse and many more years to train a doctor; and if the two services become less attractive than they are at present, it can be imagined that fewer young people will choose those professions. But building hospitals and medical schools will not be the only expense. The size of the administrative staff that will be required cannot be estimated. Cer-

tain economists have estimated that the total annual cost, if such a scheme is established, would exceed \$10,000,000,000 each year."

WHEN YOU WRITE TO YOUR CONGRESSMAN

1. Be brief; keep your letter less than a page if possible.
2. Refer to the bill by number or popular name.
3. Write while the bill is "hot."
4. Be specific and reasonable in your requests.
5. Identical letters are ignored. Do write your own letter, preferably from a local viewpoint.
6. If you have experience or special knowledge about the issue, state it.
7. When your Congressman votes your way, congratulate him.

PROGRAM SUGGESTIONS TO THE WOMAN'S AUXILIARY OF THE A.M.A.

Keep a file to pass on to your successor.

Give increasing responsibilities to younger and newer members.

Know your A.M.A., its history, aims, accomplishments, 10-point health plan, local health units.

Know your communities, school health, health agencies, laws, problems. Are health laws being enforced?

Help women's organizations plan health programs.

Participation in medical and surgical relief program.

Meetings with your medical society and advisory board.

Health in all its phases, prevention and education. Health day or health institutes, rural health programs.

Source material: national and state auxiliary publications; medical publications—national, state, county; *Hygeia*.

History of pioneer doctor.

Study constitution and by-laws—national, state, county.

Prepayment voluntary medical and hospital plans.

Animal experimentation.

Assume your rightful community leadership in health.

Student nurse recruitment: goal 50,000 in 1948.

Friendly relations are good public relations. Be friendly in auxiliary and other contacts.

Be prompt; be informed on medical and health legislation. Attend all meetings.

Book reviews. Health materials and posters available through A.M.A.

Radio platters for local use also available through A.M.A.

Listen to radio programs sponsored by A.M.A.

Contact Speakers Bureau for the state and also A.M.A. to obtain speakers for special meetings.

Plan programs early for the year, not month by month. Each committee member must be permitted an opportunity to present her phase of auxiliary work. Program encompasses all auxiliary activities. It should prepare members to meet their responsibilities and purposes of the organization.

NATIONAL HEALTH AGENCIES

Many of these have field offices or local agencies. Ask for speakers' material and program suggestions. Address: 1790 Broadway, New York, N. Y.

- National Organization Public Health Nursing
- National Organization Tuberculosis Association
- National Organization Health Council
- National Organization Prevention Blindness
- American Public Health Association
- American Museum of Health
- American Heart Association
- American Social Hygiene Association
- American Nurses Association
- National Committee for Mental Hygiene, Inc.
- National League of Nursing Education
- National Foundation Infantile Paralysis: 120 Broadway, New York, N. Y.
- American Hearing Society: 1537 35th St. N.W., Washington, D. C.
- American Cancer Society: 47 Bever St., New York, N. Y.

American Association for Health, Physical Education and Recreation: 1201 164th St. N. W., Washington, D. C.

Councils of American Medical Association: Council on Medical Service, Council on Physical Medicine, Council on Medical Education and Hospitals, Council on Pharmacy and Chemistry, Council on Foods and Nutrition, Council on Industrial Health, Committee on American Health Resorts.

IT CAN BE DONE

"Dear Mrs. Chapler:

"I just want to report to you that I accepted the suggestion you made in the *News* that the book *Woman's Inside Story* would be a good one to review. I did it Monday evening, and the group of about 25 were keenly interested in it. I have loaned it to two people and have seven more on the list; one college professor's wife is having him order it for his work.

"The interesting thing to me is that the libraries do not have it, and, when I attended the meeting in St. Louis with my husband, I tried to pick it up in the book stores there and was unsuccessful. So, I ordered it. I wonder why, when it is written especially for the lay public, it is not given greater circulation. I have asked the library here to order it for I felt that it is a book which should be on the shelves."

Mrs. C. H. Mitchell,
Indianola, Iowa.

POLK COUNTY AUXILIARY

At the September meeting, a panel discussion was held with the following speakers: Mrs. A. H. Downing, "10 Point Health Program of the A.M.A."; Mrs. Allan Phillips, "Proposed Wagner-Murray-Dingell Bill"; Mrs. Harry Collins, "Compulsory Health Insurance"; Mrs. T. D. Throckmorton, "Doctors' Plan for Medical Service in Iowa."

At the November meeting, Miss Mary McCord spoke on "Recommendations of the A.M.A. for Relieving the Nursing Shortage." Mrs. A. G. Felter, state president, was a guest. She discussed the increase in national dues.

During the winter season the Polk County Auxiliary sponsors the sale at Younkers of articles made by the handicapped.

Mrs. J. E. Dyson, President

MENTAL HEALTH PRINCIPLES
TO BE APPLIED IN WHO PROGRAMS

Mental health, a new arrival in the field of medical science, has been placed by the WHO executive board on the list of priority activities of the World Health Organization, thus giving effect to a decision of the first World Health Assembly.

This is an important innovation with respect to international cooperation on health matters. What is known today as mental hygiene remained for centuries the province of morals and religion. This was true despite the claims put forward by certain medical men of genius, whose precursor was Paracelsus.

Mental hygiene is dependent upon progress made in the field of psychiatry. With Freud's discovery of the sources of nervous and mental disorders, mental hygiene became possible for the first time as a preventive and curative science.

Aim of Mental Hygiene

The aim of mental hygiene is to make of the human being an individual complete and balanced, possessing a full knowledge of himself, knowing the conflicts called forth by the clash between his instinctual drives and the dictates of society and morality, and capable of achieving a harmonious compromise between personal demands and the realities of his environment.

Mental hygiene has two essential tasks. The first of these is the prophylaxy or the prevention of nervous and mental ills. The second task relates to

health in the larger sense. It is directed toward the creation and the maintenance of healthy attitudes in individuals capable of adapting themselves to changing circumstances.

On the whole, mental prophylaxy is primarily medical in nature. Physical ills whose repercussions on the nervous system and on the mental state of the individual are harmful must be prevented. The prophylaxy of neuroses is more complicated. A child is not born abnormal as far as neuroses are concerned. However, certain children have nervous systems which are more or less vulnerable and predispose them toward mental disorders when they are confronted with family difficulties and educational problems.

Must Begin With Child Training

Every mental health program must begin with parents, educators and all those responsible for the training of children. In the life of every human being, crises in which the psyche is disturbed to a greater or lesser extent occur at approximately the same periods, but under widely varying circumstances: birth, weaning, the transition from family life to child groups or school; the changes which come about during puberty; the assumption of the responsibilities of adulthood; marriage; the onset of old age. The tensions at these periods vary with family, religion, social system, etc. Mental hygiene has a part to play in each of these stages where instinctual drives enter into conflict with the realities of the environment.

The force of primitive instinct is the source of the dynamism and the energy of the individual. However, these drives must be sublimated and transposed if the individual is to acquire his full stature as a human being. The richer and fuller life is in terms of varied interests . . . the easier it is for him to maintain a proper balance between his instincts and the requirements of the surroundings in which he finds himself. It is here that mental hygiene has a broad field for positive and constructive action in which a number of other branches of human knowledge such as politics, education, sociology or religion can collaborate.

Medical science until very recently was preoccupied with the physical aspects of man's life. The specifically human element—the mind—was neglected. Hence the need for training educators to assist effectively in the development of children toward emotional and social maturity.

In modern society, man lacks security and a sense of belonging. He is ridden with anxieties. That is why he is "bad." Political dissensions and disharmony goad on this aggressiveness into attacks on the "racial enemy" or the "class enemy," arousing claims and counter-claims which contain the seeds for new conflict.

The teaching and the practice of mental hygiene principles thus can render great service. It is an everyday experience of psychotherapists that criminal tendencies can be transformed into positive and

socially useful energy. All the more easily can the aggressiveness of normal human beings, both individually and collectively, be liberated and sublimated.

Work of WHO

It is in this way that the World Health Organization will play its part. The organization has undertaken the task of applying mental hygiene principles in its health programs. The work of WHO in this field is concerned particularly with the prevention and with the cure of physical ills.

The program approved by the WHO executive board also provides for special studies as well as for demonstrations in educational methods with respect to mental health. An important objective in this connection will be to raise levels of professional training, the term being understood in the broadest sense to include a large number of professions which are considered as having a role to play in the field of mental health. Finally, WHO will endeavor to extend its action to as many areas as possible in co-operation with such other organizations as UNESCO and the World Federation for Mental Health, which was established last August at an international conference in London.

Thus the World Health Organization is moving toward full realization of the objective set forth in its constitution as "the attainment by all peoples of the highest possible level of health," with the word health defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

WHO Newsletter, Nov.-Dec. 1948

IOWA HEALTH AGENCIES Iowa Tuberculosis Association

The work of the Iowa Tuberculosis Association is performed principally through the local association in each county. The county organizations have a board of directors and are capable of independent action.

The county associations devote their efforts and their funds largely to health education and case-finding surveys using tuberculin tests and x-rays. They also carry out rehabilitation, public health nursing and other projects which cannot be financed with tax funds.

Five counties, Black Hawk, Linn, Polk, Scott and Woodbury, have full-time paid executive secretaries. Contact can be established at any time with these officials. The remainder of Iowa's counties are served by volunteer workers.

All persons living in Iowa are eligible at no cost. Applications should be made at the Iowa Tuberculosis Association, 301 Empire Building, Des Moines.

State Sanatoria

The state sanatoria provide for the care and treatment of pulmonary tuberculosis in all stages of the disease. Custodial and remedial care and treatment are offered, including the latest approved surgical collapse methods.

All bonafide residents of Iowa are eligible for admittance. Residence requirements in Iowa are 2 years.

The cost of treatment is charged to the county of residence regardless of the patient's ability or inability to pay. The county may collect from the patient or responsible relatives when possible. At the present time, cost of treatment is running from \$95 to \$119 per month.

Application blanks are furnished by the sanitorium upon request. These blanks include the attending physician's statement and a statement of residence signed by the county board of trustees or board of supervisors. Patients are admitted in turn when there is a waiting list, except that preference may be shown to those most in need of treatment or most dangerous to the public welfare.

County Tuberculosis Sanatoria in Iowa

Broadlawns, Des Moines, Polk County.

Oakdale, Oakdale, Johnson County.

Pine Knoll, Davenport, Scott County.

Sunny Crest, Dubuque, Dubuque County.

Sunnyslope, Ottumwa, Wapello County.

From Iowa Health Agencies:
A Handbook of Information

X-RAY OUTLOOK

The State Health Department and the Iowa Tuberculosis and Health Association are working together on a program which will set a goal of x-ray for the chest of every man, woman and child in Iowa. It is estimated that four years will be required to achieve this task. Individuals will be x-rayed free of charge. Christmas seal returns will help to defray expenses. In 1947, 294 people died of tuberculosis in Iowa. There were approximately 3,000 cases in the state last year. Discovery and treatment of unknown cases should reduce this figure to a minimum.

PREPAYMENT PLANS IN IOWA

The Blue Cross was organized by Iowa hospitals. One hundred thirty-four hospitals in the state participate in the plan. Its service is offered through Hospital Service, Inc., (Des Moines) in 73 counties in the eastern three-fourths of the state. Associated Hospital Service (Sioux City) provides for the 26 western counties and South Dakota. The latter offers benefits only in its own territory. There are more than 550,000 enrollees, who paid \$3,382,185 during the first 9 months of 1948 and received \$2,874,519 in benefits. Individuals subscribe through a group plan and pay \$1.25 monthly or \$2.65 for full family coverage. This fee cares for hospital room rent, anesthesia fees, special hospital treatment and drugs. There is a ceiling on room rent and anesthesia.

Both the Blue Cross and Blue Shield are non-profit. The Blue Shield, sponsored by the Iowa State Medical Society, was started in 1945 and has an enrollment

of 70,000. Its purpose is to provide complete medical and surgical coverage to low-income families and a portion of such expenses for well-to-do individuals and families. Sixty-seven per cent of the physicians in the state participate in the Blue Shield. A combination of Blue Cross and Blue Shield costs \$5.40 monthly per family and covers hospital expense and medical and surgical expenses resulting from hospitalization. Both Blue Cross and Blue Shield are open to groups of workers in business and industrial organizations and farm groups.

HOSPITALS IN THE MIDDLE AGES

"The first important hospital of western Europe was founded at Fabiola about the year 400. Its purpose, in the words of St. Jerome, was 'to gather in the sick from the streets and to nurse the wretched sufferers wasted with poverty and disease.' This hospital and the many that came after it extended hospitality to the sick.

"The name 'hospital' comes from the same Latin source as 'hospitality.' The word was carried into the English language and either in that form or more commonly as 'spittle house' was applied to all institutions of refuge; those that cared for the sick and also those that housed the paupers and insane. It is only in recent times that 'hospital' has come to signify a place where the sick receive temporary aid and shelter.

"The hospitals of medieval Europe were dark, crowded, unsanitary buildings into which all classes of the destitute were received without discrimination. The inmates were given food, shelter and religious admonition, but no medical treatment."

A Sketch of Medicine and Pharmacy
By S. E. Massengill, M.D.

NOTE

For further Auxiliary news, your attention is directed to the editorial appearing on page 75 of this month's Journal entitled, "The Woman's Auxiliary—A Useful Adjunct."

AMERICAN RED CROSS Blood Program

The Red Cross National Blood Program is designed to help provide blood and blood derivatives to save lives and prevent needless suffering throughout the nation. The program will provide whole blood and blood products to physicians and hospitals for medical use, serving not only the civilian hospitals but those of the Veterans Administration, the Armed Forces and U. S. Public Health Service as well.

Volunteers Needed

Men as well as women are needed by local Red Cross Chapters in providing services to veterans, the armed forces and civilians. Especially needed are men for Motor Service, Entertainment and Instruction Service and for disaster emergency work.

SOCIETY PROCEEDINGS

MEETINGS

Adair County

The regular session of the Adair County Medical Society was held December 21 at Hotel Greenfield in Greenfield. Following a supper for members and their wives, the following officers were elected: Dr. Ralph DeCicco, president; Dr. Charles D. Shope, vice-president; Dr. Arthur S. Bowers, secretary-treasurer; Dr. Lewis H. Ahrens, delegate; and Dr. Ralph E. Wiley, alternate delegate.

Cass County

Dr. Millard T. Petersen was elected president of the Cass County Medical Society at the annual meeting held January 10 in Atlantic. Dr. Walter F. Giegerich was named vice-president; Dr. John F. Moriarty, secretary-treasurer; Dr. Millard Petersen, delegate. On the board of censors are Dr. George A. Alliband, Dr. Reu L. Barnett and Dr. Emil C. Petersen.

Clinton County

At a dinner meeting of the Clinton County Medical Society, held December 17 at the Lafayette Hotel in Clinton, Dr. Mayo Soley, Dean of the College of Medicine at the State University of Iowa, gave an address on "Radioactive Iodine in the Diagnosis and Treatment of Diseases of the Thyroid." At the election of officers following, Dr. Vernon W. Petersen was re-elected president; Dr. John R. Jowett, vice-president; Dr. May Danielson, secretary-treasurer; and Dr. Edward T. Carey, board of censors.

Cerro Gordo County

Dr. Leslie W. Swanson was re-elected president of the Cerro Gordo County Medical Society at a meeting held December 14 at Hotel Hanford in Mason City. Dr. Guido J. Sartor was elected vice-president; Dr. James W. Lannon, secretary; Dr. Harry G. Marinos, treasurer; Dr. Carroll O. Adams, delegate; and Dr. Harold W. Morgan, alternate delegate.

Dubuque County

Dr. Ross P. Rusk was elected president of the Dubuque County Medical Society at a meeting held December 14 in Dubuque at the Bunker Hill Golf Club. Other newly elected officers are Dr. Alfred B. Nesler, first vice-president; Dr. Frank J. Bries, second vice-president; Dr. Robert D. Storck, secretary; Dr. John C. Kassmeyer, delegate; and Dr. Donovan F. Ward, alternate delegate.

Fayette County

The Fayette County Medical Society met December 14 at the County Farm, acting as hosts to the county social workers, attorneys, judges, etc. The program was presented in cooperation with the Iowa State Mental Hygiene Society. Dr. Leonard P. Ristine, Superintendent of the State Hospital at Mt. Pleasant, spoke on the "Mental Hygiene Movement in Iowa," and Dr. Leo B. Sedlacek of Cedar Rapids discussed the "Social Aspects of Alcoholism." A film, "The World We Would Like to Live In," was presented. An election of officers followed the program; Dr. Bonnybel A. Hall was named president; Dr. Ardo M. Hess, vice-president; and Dr. Morris G. Beddoes, secretary.

Hancock-Winnebago Counties

The Hancock-Winnebago County Medical Society met December 23 at the Hotel Forester in Forest City. Dr. Calvin O. Brewster was elected president; Dr. George F. Dolmage, vice-president; and Dr. Ivan E. Brown, secretary-treasurer.

Iowa County

At a dinner meeting held December 8 in Marengo, members of the Iowa County Medical Society were addressed by Dr. Ralph D. Hunting of Cedar Rapids on the subject of "Chest Pain." At the election of officers following, Dr. Donald F. Miller was re-elected president; Dr. Thomas D. Clark, vice-president; Dr. Irvin J. Sinn, secretary-treasurer. Dr. Clyde F. Watts was named delegate to the state convention.

Johnson County

The Johnson County Medical Society met January 5 at the Jefferson Hotel in Iowa City. Dr. John W. Dulin spoke on "Surgery of Peptic Ulcer," and Dr. Nathan A. Womack opened the discussion which followed.

Lee County

Newly elected officers of the Lee County Medical Society are Dr. Raymond E. Cooper, president; Dr. Valentine T. Doering, vice-president; and Dr. Harold T. Werner, secretary.

Linn County

Dr. Walter Dannreuther of New York City will address members of the Linn County Medical Society February 10 at the Hotel Roosevelt in Cedar Rapids. Discussants will be Dr. Everett D. Plass of the Department of Obstetrics at the University of Iowa and Dr. Charles S. Day of Cedar Rapids.

Page County

The Page County Medical Society met December 16 at the Clarinda State Hospital. Dr. Ralph A. Dorner of Des Moines spoke on the subject of "Surgical Treatment of Bronchiectasis." The annual election of officers was held; Dr. C. Herbert Brush was elected president; Dr. Norman D. Render, vice-president; and Dr. Frederick S. Sperry, secretary-treasurer.

Pocahontas County

Dr. John B. Thielen is the newly elected president of the Pocahontas County Medical Society; Dr. John M. Rhodes, vice-president; Dr. Charles L. Jones, secretary-treasurer; and Dr. Frank J. Anderson, delegate. The election of officers was held December 23 at the home of Dr. Jones in Gilmore City.

Pottawattamie County

The annual election of officers of the Pottawattamie County Medical Society was held December 21 at the Hotel Chieftain in Council Bluffs. Dr. Isaac Sternhill was elected president; Dr. Eugene B. Floersch, vice-president; and Dr. Sidney A. Cohen, secretary.

Sioux County

At a meeting held December 21 in Hawarden, the Sioux County Medical Society named Dr. Lester R. Hegg, president; Dr. Edward B. Grossman, vice-president; and Dr. Cornelius B. Murphy, secretary-treasurer.

Union County

Dr. James G. Macrae was elected president of the Union County Medical Society at a meeting held January 5 at the Greater Community Hospital in Creston. Other officers are Dr. Cyril J. Ryan, vice-president; Dr. Carl E. Sampson, secretary-treasurer; and Dr. Cullen B. Roe, delegate.

Webster County

Newly elected officers of the Webster County Medical Society are Dr. Harold T. Larsen, president; Dr. Charles H. Coughlan, vice-president; Dr. Daniel S. Egbert, secretary-treasurer; Dr. Ernest M. Kersten, delegate; Dr. James H. Bruce, alternate delegate; Dr. Albert A. Schultz, executive committee member; Dr. Paul C. Otto and Dr. Coughlan, board of censors; and Dr. Lewis L. Leighton, clinic director.

Woodbury County

Dr. Edward M. Honke is the new president of the Woodbury County Medical Society; Dr. Wayland K. Hicks, president-elect for 1950. Other officers named at the meeting held December 14 at the Sioux City Club are Dr. Frederic L. Wilson, vice-president; Dr. Edward H. Sibley, re-elected secretary; and Dr. Frank McCarthy, delegate.

PERSONALS

Dr. Lillian Arendale of St. Louis is the new staff physician at Cherokee State Hospital. Dr. Arendale was graduated from Marquette University School of Medicine in 1913. She has served at the Lying-In-Hospital and the Women's and Children's Hospital, both in Chicago, and Bellevue Hospital in New York. Most recently, she has been on the staff of the state mental institution at Massillon, Ohio.

Dr. George A. Bairnson of Cedar Falls addressed the Rotary Club January 4 on the subject of "Socialized Medicine."

Dr. Albin C. Bergstrom, who has practiced medicine in Missouri Valley for 17 years, has become associated with Dr. W. W. Carveth in Lincoln, Neb. He plans to commute temporarily between Lincoln and Missouri Valley.

Dr. Vernon B. Blaha has opened an office for the practice of general medicine in Marshalltown. Born in Whitten, he was graduated from the State University of Iowa School of Medicine in 1942 and has been practicing in Detroit, Mich., since 1942.

Dr. Kenneth M. Coyne of Burlington was the special speaker at the annual Directors Meeting of the Public Health Nursing Association on January 11.

Dr. Robert F. Deranleau has recently opened a practice of general medicine in Perry. Born in Anaconda, Mont., Dr. Deranleau is a graduate of the University of Minnesota School of Medicine. After completing his internship at Northwestern Hospital in Minneapolis, Minn., he served two years in the U. S. Army Medical Corps. Since June of last year, he has been associated in Minneapolis.

Dr. Jay R. Dewey of Schaller discussed "Cancer" in an address to the Cherokee Kiwanis Club on December 28.

Dr. Rubin H. Flocks, Professor of Urology at the State University of Iowa School of Medicine, delivered two speeches on "Etiological Factors of Calculus Disease and Obstructural Uropathy," at the meeting of the American Urological Association in Buffalo, N. Y., on January 6 and 7.

Dr. Leon J. Galinsky of Des Moines spoke on "Streptomycin in the Treatment of Tuberculosis" at the eighth district meeting of the Iowa State Nurses' Association in Fort Dodge.

Dr. John S. Giffin, Director of the Student Health Service at Iowa State Teachers College for two years, has accepted a position as Assistant Director of the Student Health Service at Oregon State Col-

lege, Corvallis, Ore. Dr. Donald H. Boettner has been appointed to replace Dr. Giffin. Dr. Boettner was graduated from Northwestern University Medical School in 1944 and interned at the Cook County Hospital in Chicago. After serving in the U. S. Army Medical Corps, he was Resident Physician at Percy Jones General Hospital at Battle Creek, Mich. Since June 1948, he has practiced in Bellingham, Wash.

Dr. J. J. Gleeson, Jr., of Omaha, a graduate of Creighton University School of Medicine, has opened offices for the practice of medicine in Vail.

Dr. Russell S. Gerard of Waterloo addressed members of the Cedar Falls Rotary Club January 11 on the subject of "Socialized Medicine in England." Dr. Girard spent last summer in England, where he investigated the socialized medicine program of the British Labor government.

Dr. Harris R. Heise of Cleveland, Ohio, has become associated with Dr. Louis F. Talley of Marshalltown.

Dr. Howard H. Hildebrand has rejoined the staff of the McFarland Clinic in Ames where he was associated before the war. He served in the U. S. Navy Medical Corps and recently completed two years of study at Children's Hospital in Buffalo, N. Y.

Dr. Francis N. Johnson of Des Moines, a graduate of the University of Iowa School of Medicine, has recently opened a practice in Madrid.

Dr. Joseph L. Kehoe has become associated with Dr. Preston E. Gibson of Davenport. Dr. Kehoe has recently completed a year and a half of special training in pediatrics at the Children's Hospital in Iowa City.

Dr. Joseph H. LaTona of Shelby has announced his association with Dr. J. Donald Hennessy of Council Bluffs. Dr. James Maynard of Des Moines has taken over Dr. LaTona's practice in Shelby.

Dr. F. R. McFadden, formerly of St. Louis, has opened medical offices in Davenport, specializing in obstetrics and gynecology. A graduate of the State University of Iowa School of Medicine, Dr. McFadden interned at the University Hospitals and took postgraduate training at St. Barnes and St. Louis Maternity Hospitals in St. Louis.

Dr. H. Spitzer is the new Assistant Physician at the Clarinda State Hospital. Born in Vienna, Austria, Dr. Spitzer spent 19 years in the Netherlands West Indies and, since coming to the United States in 1947, has practiced in West Virginia and New York states.

Dr. Harry B. Weinberg discussed heart disease before members of the Davenport Kiwanis Club on December 16.

Dr. Max E. Witte has been appointed Superintendent of the Independence State Mental Hospital. Dr. Witte was graduated from the State University of Iowa School of Medicine in 1920 and served his internship at Boston Psychopathic Hospital and Boston City Neurological Hospital. After serving 17 years at the mental hospital in Bangor, Maine, where he was assistant superintendent for 12 years, Dr. Witte entered the U. S. Army Medical Corps. Since 1946, he has been in private practice at Portland, Maine.

Speaking at the meeting of the American Laryngological, Rhinological and Otological Society which met January 17 in Iowa City were Drs. Adolph L. Saks, Dean M. Lierle and Clair M. Kos, all of the State University of Iowa School of Medicine.

Dr. Herbert W. Rathe of Waverly has been named president of the newly organized Iowa Heart Association. Other officers are Dr. William W. Bean, vice-president, and Dr. Lewis E. January, secretary, both of the Department of Internal Medicine at the State University of Iowa School of Medicine.

Doctors of the State University of Iowa School of Medicine, who spoke at the Public Health Nursing Institute, held at the University January 18-21, were Drs. R. R. Rembolt, Robert W. Newman, Spencer Brown, Hunter Comly, Julian D. Boyd, William D. Paul and Artheur Steindler. Dean M. H. Soley gave the opening address.

DEATH NOTICES

Kreul, Dwight G., 78, died December 18 at his home in Davenport following a heart attack. Dr. Kreul, who was born in Fennimore, Wisc., was graduated from Milwaukee Medical School in 1897. Following several years of postgraduate study, Dr. Kreul came to Davenport where he practiced for 51 years. He was a member of the Scott County and Iowa State Medical Societies.

Noble, Harold F., 46, died December 28 at his home in Fort Madison following a six months illness. Dr. Noble was graduated from the State University of Iowa School of Medicine in 1924 and served his internship at Harper Hospital, Detroit, Mich., and Cook County Hospital, Chicago. He was a member of the Lee County and Iowa State Medical Societies.

Tombaugh, Frank M., 79, of Burlington died at his home December 31 after suffering a sudden heart attack. He was graduated from Northwestern University Medical School in 1896, and began practicing medicine in Burlington in 1899. He was a life member of the Des Moines County and Iowa State Medical Societies.

The JOURNAL *of the* Iowa State Medical Society

Vol. XXXIX

Des Moines, Iowa, March, 1949

No. 3

IOWA STATE MEDICAL SOCIETY

Organized in 1850

Ninety-Eighth Annual Session

Des Moines, Iowa, April 18-21, 1949

Hotel Fort Des Moines

PROGRAM OF GENERAL SESSIONS

Main Ball Room

Tuesday, April 19

- 9:00 Greetings—
FRED STERNAGEL, M.D., President
Polk County Medical Society
Response—
WILLIAM E. ASH, M.D., First Vice
President, Iowa State Medical Society
- 9:15 Problems in the Diagnosis and Treatment of
Rheumatic Fever
HARRY H. GORDON, M.D., Denver
Professor of Pediatrics, University of
Colorado Medical School
- 9:45 Inflammatory Lesions of the Small and
Large Bowel
RICHARD B. CATTELL, M.D., Boston
- 10:15 Intermission to visit exhibits
- 10:30 Treatment of Diabetes
GEORGE B. CROW, M.D., Burlington
- 11:00 The Social, Moral and Economic Implica-
tions of Political Medicine
ARTHUR L. CONRAD, A.B., Ed.M., J.D.,
Chicago, Assoc. Administrator, National
Physicians Committee
- 11:30 Headache and Neuralgia of Nasal Origin
LAWRENCE R. BOIES, M.D., Minneapolis

Wednesday, April 20

- 9:00 Sarcoidosis
WALTER NADLER, M.D., Chicago
Professor of Medicine, Northwestern
University Medical School
- 9:30 Ulcerative Colitis (Colored Motion Pictures)
LOUIS A. BUIE, M.D., Rochester
Professor of Proctology, University of
Minnesota Graduate School of Medicine
- 10:00 Fractures in Children Are Different
WALTER P. BLOUNT, M.D., Milwaukee
- 10:30 Intermission to visit exhibits
- 10:45 Diagnostic Difficulties in Carcinoma of the
Lungs
FORRESTER RAINE, M.D., Milwaukee
Associate Clinical Professor of Surgery,
Marquette University School of Medicine



JAMES E. REEDER, M.D.
PRESIDENT
IOWA STATE MEDICAL SOCIETY
1948-1949

PROGRAM OF GENERAL SESSIONS

Thursday, April 21

- 9:00 Pelvic Pain in Women
WILLIAM F. MENGERT, M.D., Dallas
Professor and Chairman, Department of
Obstetrics and Gynecology, Southwestern
Medical College

9:20 Indications for Cesarean Section
WILLIAM A. BOICE, M.D., Chicago

9:40 Treatment of Epilepsy by the General Prac-
titioner
ABE B. BAKER, M.D., Minneapolis
Professor and Director, Division of Neu-
rology, University of Minnesota Medical
School

10:15 Intermission to visit exhibits
- 10:20 The Food and Drug Act
AUSTIN SMITH, M.D., Chicago
Director, Division of Therapy and Re-
search; and Secretary, Council on Phar-
macy and Chemistry, American Medical
Association

10:45 Differential Diagnosis of the More Common
Pulmonary Conditions
ARTHUR M. OLSEN, M.D., Rochester

11:10 Report of House of Delegates and Installa-
tion of President

11:30 Adjourn Sine Die

SECTION MEETINGS

Surgical Section

William E. Cody, M.D., Sioux City, Chairman

Tuesday Afternoon, April 19

South Ball Room

- 2:00 Recent Advances in Surgical Treatment of
Diseases of the Pancreas
RICHARD B. CATTELL, M.D., Boston
- 2:30 Small Bowel Obstruction
DONALD F. RODAWIG, M.D., Spirit Lake
- 2:50 General Consideration of Maxillo-Facial
Surgery
DONOVAN F. WARD, M.D., Dubuque
- 3:10 Immediate and Early Plastic Closure of
Open Wounds (Kodachrome Slides)
JULIAN M. BRUNER, M.D., Des Moines
- 3:30 Anticoagulant Therapy in Surgical Patients
ROBERT T. TIDRICK, M.D., Iowa City
- 3:50 Surgical Treatment of Varicose Veins
JOHN W. DULIN, M.D., Iowa City

Wednesday Afternoon, April 20

Main Ball Room

- 2:00 Management of Anal Fistulas
LOUIS A. BUIE, M.D., Rochester
- 2:30 What Are You Doing for Backs?
WALTER P. BLOUNT, M.D., Milwaukee
- 3:00 Surgical Treatment of Cardiospasm
FORRESTER RAINE, M.D., Milwaukee
- 3:30 Subcutaneous Emphysema as a Surgical
Problem
THOMAS F. THORNTON, M.D., Waterloo
- 3:50 Lower Nephron Nephrosis
GEORGE D. JENKINS, M.D., Burlington
- 4:10 Use of Tantalum Gauze in Repair of Diffi-
cult Hernias (Colored Motion Pictures)
TOM D. THROCKMORTON, M.D., Des Moines

Eye, Ear, Nose and Throat Section

Oral L. Thorburn, M.D., Ames, Chairman

Tuesday Afternoon, April 19

The Ranch Room

- 2:00 Middle Ear Disease in Children
LAWRENCE R. BOIES, M.D., Minneapolis
- 2:45 Retinopathy in Young Diabetics
GLENN L. WALKER, M.D., Iowa City
Discusser:
JOHN H. MATHESON, M.D., Des Moines
- 3:30 Spontaneous Rupture of the Esophagus
ROSS G. RANDALL, M.D., Waterloo
Discusser:
BYRON M. MERKEL, M.D., Des Moines
- 4:15 Suction Method for Extraction of Cataracts
JESSE H. MCNAMEE, M.D., Des Moines
Discusser:
LELAND H. PREWITT, M.D., Ottumwa

Wednesday Afternoon, April 20

The Ranch Room

- 2:00 The Cyclodialysis Operation
OTIS S. LEE, M.D., Iowa City
Discusser:
J. KENNETH VON LACKUM, M.D., Cedar
Rapids
- 2:45 Evaluation of the Diagnosis and Treatment
of External Otitis
CLAIR M. KOS, M.D., Iowa City
Discusser:
ORAL L. THORBURN, Ames
- 3:30 Retroental Fibroplasia
ARTHUR H. DOWNING, M.D., Des Moines
Discusser:
PLACIDUS J. LEINFELDER, M.D., Iowa City
- 4:15 The Incidence of Glaucoma
GARDNER D. PHELPS, M.D., Waterloo
Discusser:
CARL A. NOE, M.D., Cedar Rapids

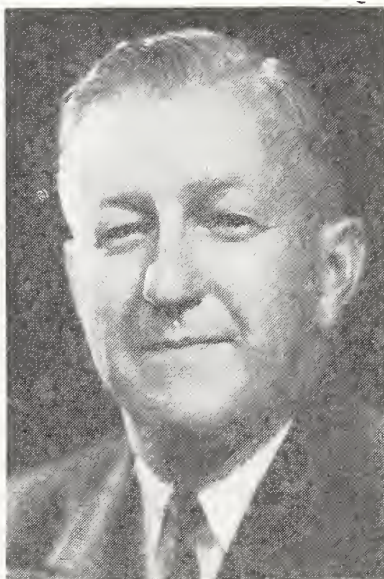
GUEST SPEAKERS



FORRESTER RAINE, M.D.
Milwaukee



ARTHUR L. CONRAD
Chicago



LAWRENCE R. BOIES, M.D.
Minneapolis



LOUIS A. BUIE, M.D.
Rochester



WILLIAM F. MENGERT, M.D.
Dallas

SECTION MEETINGS

Medical Section

Kenneth K. Hazlet, M.D., Dubuque, Chairman

Tuesday Afternoon, April 19

Main Ball Room

- 2:00 Transfusion in Anemia
ROBERT C. HARDIN, M.D., Iowa City
Discusser:
FOREST H. COULSON, M.D., Burlington
- 2:30 Progress in the Treatment of Blood Dyscrasias
WILLIS M. FOWLER, M.D., Iowa City
Discusser:
ROBERT N. LARIMER, M.D., Sioux City
- 3:00 Angiocardiography
PHILIP G. KEIL, M.D., Des Moines
Discusser:
DANIEL J. GLOMSET, M.D., Des Moines
- 3:30 Cutaneous Reactions to the Newer Chemotherapeutic and Biotherapeutic Agents
ROBERT L. BARTON, M.D., Dubuque
Discusser:
RUBEN NOMLAND, M.D., Iowa City
- 4:00 Diabetic Panel
LESLIE W. SWANSON, M.D., Mason City, Chairman
ARTHUR G. LUECK, M.D., Des Moines
JULIAN E. MCFARLAND, M.D., Ames
GEORGE B. CROW, M.D., Burlington

Wednesday Afternoon, April 20

South Ball Room

- 2:00 Recent Developments in the Management of Acute Myocardial Infarction with Special Reference to Anticoagulant Agents
WILLIAM B. BEAN, M.D., Iowa City
- 2:30 Strokes—Their Evaluation and Treatment
ABE B. BAKER, M.D., Minneapolis
Discusser:
CLARK H. MILLIKEN, M.D., Iowa City
- 3:00 Medical Treatment of Thyrotoxicosis
HYMAN M. HUREVITZ, M.D., Davenport
Discusser:
FRED SLOAN, M.D., Waterloo
- 3:30 The Electrocardiogram and a Standard Exercise Test in Coronary Insufficiency
LEWIS E. JANUARY, M.D., Iowa City
Discusser:
BENJ. F. WOLVERTON, M.D., Cedar Rapids
- 4:00 An Appraisal of Therapeutic Measures in Bronchial Asthma
LAWRENCE J. HALPIN, M.D., Cedar Rapids
Discusser:
ROLLIN M. PERKINS, M.D., Davenport
- 4:30 Acute Meningitis—Diagnosis and Treatment
LEE FORREST HILL, M.D., Des Moines
Discusser:
ADOLPH L. SAHS, M.D., Iowa City

Pediatric Section

Peirce D. Knott, M.D., Sioux City, Chairman

Monday Afternoon, April 18

Blank Memorial Hospital

- 2:00 Seminar: Feeding of Premature Infants
HARRY H. GORDON, M.D., Denver

This meeting of the Iowa Pediatric Society will be open to any physician. Registration fee of \$5.00 for all physicians in private practice will be charged; there will be no fee for physicians receiving hospital training.

Tuesday Afternoon, April 19

Blank Memorial Hospital

- 2:00 Neurogenic Vesical Neck Dysfunctions
CHARLES W. LATCHEM, M.D., Des Moines
- Fetal Endocarditis
CHARLES L. BURR, M.D., Des Moines
- Congestive Splenomegaly following Portal Thrombosis
BRACE I. KNAPP, M.D., Des Moines and
JACK SPEVAK, M.D., Des Moines
- Discusser:
JAMES E. DYSON, M.D., Des Moines
- Histoplasmosis
HENRY H. GORN, M.D., Des Moines
- Roseola Infantum
LEE FORREST HILL, M.D., Des Moines

Obstetric Section

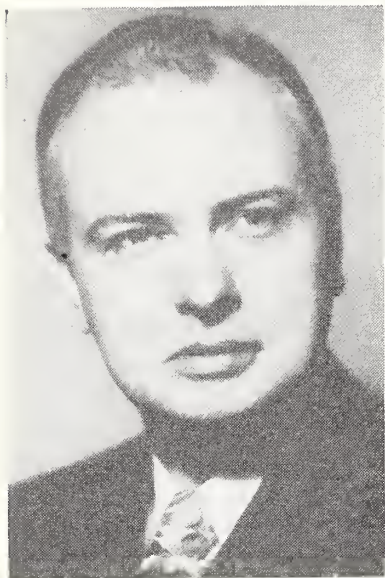
Ralph R. Edwards, M.D., Centerville, Chairman

Wednesday Afternoon, April 20

Des Moines Club

- 2:00 Saddle Block Anesthesia in Pelvic Deliveries
WILLIAM A. BOICE, M.D., Chicago
- 3:00 Prolonged Labor
WILLIAM F. MENGERT, M.D., Dallas
- 4:00 Round Table Discussion on Problems in Obstetrics and Gynecology
JOHN H. RANDALL, M.D., Iowa City

GUEST SPEAKERS



AUSTIN SMITH, M.D.
Chicago



WALTER P. BLOUNT, M.D.
Milwaukee



RICHARD B. CATTELL, M.D.
Boston



WILLIAM A. BOICE, M.D.
Chicago



ABE B. BAKER, M.D.
Minneapolis

Special Luncheons and Dinners

Monday Night, April 18

IOWA PEDIATRIC SOCIETY
Des Moines Club—Colonial Room
6:00 p. m.
Wives invited

Tuesday Noon, April 19

IOWA PATHOLOGICAL SOCIETY
Des Moines Club
12:15 p. m.

Tuesday Night, April 19

**AMERICAN ACADEMY OF GENERAL
PRACTICE**
Fort Des Moines Hotel—South Ball Room
6:30 p. m.

EYE, EAR, NOSE AND THROAT SECTION
Des Moines Club—Basement Room
5:30 p. m.
Wives invited

IOWA ANESTHESIOLOGICAL SOCIETY
Hotel Fort Des Moines—The Ranch
5:30 p. m.

IOWA X-RAY CLUB
Des Moines Club
6:00 p. m.

**STATE SOCIETY OF IOWA MEDICAL
WOMEN**
and

**AMERICAN MEDICAL WOMEN'S ASSOCIA-
TION, BRANCH 19**
Younkers Tea Room
6:30 p. m.

SMOKER
Hotel Fort Des Moines—Main Ball Room
8:30 p. m.

Wednesday Morning, April 20

IOWA MEDICAL SERVICE
Fourth Annual Meeting
Hotel Fort Des Moines—Ranch Room
10:00 a. m.
All doctors invited to attend

Wednesday Noon, April 20

IOWA OBSTETRIC SOCIETY
Des Moines Club—Colonial Room
12:15 p. m.

IOWA NEUROPSYCHIATRIC SOCIETY
Hotel Fort Des Moines—Parlor A
12:15 p. m.

IOWA ORTHOPEDIC CLUB

Hotel Fort Des Moines—Dining Rooms 1 and 2
12:15 p. m.
Orthopedic Round Table
All interested doctors invited

**STATE SOCIETY OF IOWA MEDICAL
WOMEN**

Younkers Tea Room
12:15 p. m.

Wednesday Night, April 20

Annual Banquet

Hotel Fort Des Moines—Main Ball Room
7:00 p. m.
Dinner—Music—Dancing

Thursday Noon, April 21

IOWA SOCIETY FOR MENTAL HYGIENE
South Ball Room
12:15 p. m.

ABE B. BAKER, M.D., Minneapolis,
Speaker
All interested doctors invited

House of Delegates

First Meeting, Monday Evening, April 18
8:00 p. m.

South Ball Room—Hotel Fort Des Moines
Roll Call
Approval of Minutes of Wednesday Morning Session,
1948
President's Address
President-elect's Address
Reports of Officers
Reports of Committee Chairmen
Memorials and Communications
New Business
Election of Committee on Nominations

Second Meeting (Time and place to be determined
at first meeting)

Roll Call
Reading of Minutes
Report of Committee on Nominations
Election of Officers
Reports of Committees
Unfinished Business
New Business
Announcement of Committees
Adjournment

Golf Tournament

There will be a golf tournament. The date and place are yet to be decided, but an announcement will be made. All golfers are urged to get in condition for the competition.

Woman's Auxiliary

For program, see page 135 in Woman's Auxiliary News.

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 James B. Knipe.....Armstrong
 Robert N. Larimer.....Sioux City
 Edward F. Beeh.....Fort Dodge
 James C. Hill.....Newton
 Harold A. Housholder.....Winthrop
 Clyde A. Boice.....Washington
 Elias B. Howell.....Ottumwa
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 William S. Reiley.....Red Oak

THE JOURNAL

Everett M. George, Editor.....Des Moines

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SCIENTIFIC SECTION

CHRONIC INTESTINAL INSUFFICIENCY (CELIAC DISEASE) IN CHILDREN

Charles D. May, M.D., Minneapolis, Minn.

Definition

Sir Samuel Gee, a London physician, first described a group of children, for whom he coined the term "celiac disease," who were characterized by malnutrition, abdominal distension and the passage of bulky, mushy, foul, fatty feces. He was aware that these features might be caused by a variety of conditions which could interfere with normal absorption of food by the intestines. Subsequently, experience has shown that the conditions which commonly cause a chronic disturbance of nutrition, with features similar to those described by Gee, fall into the following groups:

1. Chronic infections either within or outside of the gastro-intestinal tract, such as dysentery and chronic respiratory tract infections.
2. Abnormalities of structure or motor function of the gastro-intestinal tract, such as low grade stenosis of the bowel, megacolon and deficiency disease states.
3. Lack of external secretions of the pancreas, such as fibrosis of the pancreas, in which the enzymes from the pancreas are lacking or deficient.
4. Chronic idiopathic malabsorption from the intestine, as in celiac disease.

This discussion is primarily concerned with the group suffering from chronic idiopathic intestinal malabsorption or insufficiency in which none of the other diseases can be found to account for the symptoms. It is for this group that the term "celiac disease" is now reserved by pediatricians. The other conditions will be referred to only to the extent necessary to describe their differentiation from the celiac disease group. It should be clear that this group of children may not be suffering from the results of a single disease but that they are rather an ill-defined group with chronic intestinal insufficiency, in whom one may expect increasingly refined knowledge to identify particular causes for the malabsorption which is the feature in common.

Etiology

From what has been said, it is obvious that the etiology of this group, to whom the term "chronic intestinal malabsorption" or "celiac disease" is applied, cannot be categorically stated. In most instances the etiology is obscure. Response to therapy with liver and vitamin B complex or provision of a properly balanced diet suggests that a certain number of these individuals may be suffering from a deficiency disease. This concept is lent further support by the insidious character of the onset of the disorder and the complete return to normal health following a period of proper therapy.

Pathologic Physiology

The morbid anatomy of children dying with idiopathic chronic intestinal insufficiency of the celiac disease type is most unrevealing. No pathologic changes have been discovered in the intestine or any of the glands of digestion which could not be accounted for on the basis of the severe malnutrition which had been endured before death. It is assumed that the features are a result of disturbed function of the intestinal mucosa, which the ordinary methods of morphologic examination are unable to detect. The basic disturbance of function has been demonstrated to be an impairment of absorption of fat and carbohydrate. Digestion and absorption of protein is essentially normal. The malnutrition is a result of the combined effects of reduced intake of food, consequent upon poor appetite, and the inefficient absorption of fat and carbohydrate from that food which is ingested. The wastage of protein from the body is related to the utilization of protein for energy requirements to make up for the deficit of calories resulting from poor absorption of fat and carbohydrate.

Clinical Features

In spite of the incomplete understanding of the basic nature of the disorder, the group of children with chronic intestinal malabsorption have so many features in common that considering the disorder as a disease entity has facilitated its practical management. With this reservation these common features may be elaborated. Although this condition is not common, the chronicity of the disorder makes it a problem of considerable magnitude. The cardinal features

are anorexia, irritable disposition, failure to gain or loss of weight, distension of the abdomen and pale, offensive, unformed, bulky feces. Usually the anorexia, malnutrition and abdominal distension are the presenting features when the child is first seen by the physician, but the most indispensable sign of the disorder is the abnormal stools. Celiac disease usually develops insidiously and is seldom recognized before the age of six months. Sometimes there is an antecedent illness, such as infection or diarrhea, after which the remainder of the syndrome develops. Once the symptoms begin, there is usually a steady march of events from failure to gain weight and mild anorexia to marked anorexia, abdominal distension and an appearance of severe wasting. The stools are readily recognized as abnormal at the outset and soon take on their characteristic appearance. Occasionally the onset is abrupt, or there may be abrupt exacerbations in the symptoms during the course of the disease, in which case the stools may be actually diarrheal in character. Under extreme circumstances this may lead to rapid prostration, but the more usual picture is that of a whiny, irritable, miserable, malnourished child who sits about apathetically, the despair of all who attempt to feed him, and a source of concern because of the abnormal stools.

Recognition of this combination of symptoms is the most important step in diagnosis of the disorder. Frequently, more information is obtained from the history and clinical observation than from the substantiating laboratory determinations. In the final analysis, diagnosis is established by exclusion of the other conditions capable of causing these symptoms. The proper procedures to be pursued in this respect will be listed below.

Laboratory Features

The essential laboratory features are those dependent upon impaired absorption from the intestine. There is usually a diminished absorption of fat and carbohydrate. Staining of the feces for fat or carbohydrate materials is often misleading. Chemical analyses of *single* stool specimens for fat is also often deceptive as the normal percentage of fat in the stools may vary between the limits of 10 and 80 per cent of dry weight. Determination of actual absorption of fat by measurement of fat excretion and fat intake is cumbersome and beyond the scope of ordinary facilities. The absorption of fat-soluble vitamin A has been used as an indication of fat absorption from the gut and parallels fat absorption extremely closely. A test dose of

vitamin A is administered, and the rise in the level of the plasma vitamin A is measured at intervals during the seven hours following the test meal.¹ This again requires special but not elaborate laboratory facilities. It is generally sufficient to examine the feces grossly and see that they represent increased excretion from the gut by their bulk, abnormal consistency and fatty appearance. Absorption of glucose may be disturbed in such a variety of conditions that a glucose tolerance curve seldom gives definitive information but is always low in celiac disease. Gastro-intestinal roentgenograms also show much the same appearance in a great variety of disease states and, except for revealing anatomical abnormalities when suspected, do not contribute to the diagnosis. The most important single laboratory determination is the estimation of pancreatic enzymes in the duodenum. Enzymes in the duodenum are normal in children with celiac disease. They are absent in children with fibrosis of the pancreas or other forms of pancreatic insufficiency. Whenever this differential diagnosis is required, this measurement is indispensable. Methods of estimation of pancreatic enzymes are not beyond the laboratory of any well equipped hospital, and they have been adequately described.² Other laboratory findings have no diagnostic value but may be helpful in locating other causes for the malnutrition, particularly in respect to the urine where evidence of infection is commonly overlooked. A tuberculin test should always be done.

Diagnosis

A diagnosis of chronic intestinal malabsorption (celiac disease) is justified only when all the following criteria have been satisfied:

1. Onset of symptoms rarely before 6 months, never in neonatal period.
2. Characteristic feces.
3. Anorexia, failure to gain and loss in weight.
4. Abdominal distension.
5. No evidence of infection, anomaly of the intestine, parasitic infestation, fibrosis of the pancreas or any other disorder which might cause a chronic disturbance of nutrition.

Valuable confirmatory criteria are:

1. Impaired absorption of fat as revealed by chemical analysis of the feces or vitamin A absorption test.
2. Rise of less than 40 mg. per cent in a glucose tolerance test.
3. Normal trypsin enzyme concentration in the duodenum.

In a well established example of chronic intestinal malabsorption of the celiac disease type,

the following plan of investigation may be useful to facilitate accurate differential diagnosis and establishment of the correct diagnosis.

History: Age at onset of symptoms; lack of others in the family similarly affected; previous health, particularly as regards evidence of infections or contact with tuberculosis; diet as regards being well balanced or abused in any respect; details of the feces; the order of the appearance of the characteristic features of the disease; and response to therapy.

Physical Examination: Any evidence of infection, particularly in the ears, sinuses or lungs; abdominal distension; visible intestinal patterning, such as might be seen in low grade obstruction or palpable masses; evidence of vitamin deficiency disease.

Laboratory Data, Essential: Urine, three complete examinations, culture if any suspicion of urinary symptoms; tuberculin test; examination of the feces for appearance, parasites, and ova or culture; x-rays of the lungs and barium enema or gastro-intestinal series if anomaly of the intestine is suspected; *confirmatory* glucose tolerance test, fat absorption studies, determination of pancreatic enzymes.

The most important disorder from which celiac disease must be distinguished is fibrosis of the pancreas. Since confusion between these two conditions has so often existed, the following table is presented comparing their essential features.

Differences:	Fibrosis of the Pancreas	Celiac Disease
Onset symptoms	At birth or soon after	Rarely before 6 mos. of age
Familial incidence	Commonly	Rarely
Appetite	Good	Poor
Pulmonary infection	Present	Absent
Pancreatic enzymes	Absent	Normal
Nitrogen in feces	Increased	Normal
Glucose tolerance test	May be normal or "flat"	Always "flat"
Similarities:		
Wasting	Extreme	
Abdominal distension	Marked	
Fat absorption	Decreased	
Split fat in feces	Normal	
Clumping of barium meal in small intestine	Often present	

Treatment

Plans of treatment of celiac disease have been based on either providing a proper diet which can be assimilated in the face of impaired absorption or on a direct attack at the faulty absorption.

In a number of individuals the defect in absorption has been considerably relieved by the use of liver extract and the vitamin B complex.³ In severe cases these may need to be given parenterally. As crude a liver extract as possible should be selected for the widest possible action. In the moderately severe and mild cases, one may

give crude vitamin B complex, derived from liver or yeast, orally in amounts at least 10 times the usual daily requirements. Frequently this will cause the child's appetite to improve precipitously and his disposition to become considerably brighter. If nothing else, this will make application of dietary therapy much easier, but these substances appear to exert, in addition, a beneficial influence on the restoration toward normal of defective absorption of fat and carbohydrate.

As has been pointed out, it is unlikely that all children with these features to whom the term "celiac disease" has been applied actually have the same disorder. A certain variability in their response to treatment is to be anticipated. Indeed, about half the patients with celiac disease will only be slightly improved by liver extract or the B vitamins alone. In this connection, a plan of dietary therapy is proposed which has the broadest possible application to the various types of this disorder which have been encountered. The items of food best tolerated are protein milk, which is readily available commercially in the form of a dried powder easily reconstituted, curds or junket made from skimmed milk clotted with rennin tablets, and ground lean meat cooked without fat. Carbohydrate in the form of dextrimaltose, glucose and orange juice are usually tolerated in ordinary amounts. Some children will thrive on very ripe bananas or banana flakes, but they had best be added only after the other foods have allowed improvement to begin.

Before giving a detailed dietary regimen, it is important to stress the principles governing the use of the foods for they are as important as the individual foods themselves and must be adhered to rigorously.

1. Digestion should never be overtaxed. The amounts given at each meal must be no larger than will allow hunger to appear before the next feeding and will be completely consumed during each meal. It is best to feed the child apart from others receiving ordinary foods to avoid increasing his unhappiness and his longing for foods he is not allowed. The child is managed in regard to his response to diet primarily in terms of the feces and abdominal distension, and little or no thought should be given to the weight chart during initial therapy.

2. Increase the amount of food only when (a) the patient appears hungry after finishing a meal and all of everything offered has been consumed regularly, (b) the feces have become formed, (c) the behavior and disposition are improving, and (d) no intercurrent infections are

present which might aggravate the intolerance for food.

3. Changes in diet should be made only on the basis of observations extending over periods of a day or two. Do not change the amount or kind of food from meal to meal, and adhere to the simple items of diet. Do not be persuaded of the monotony of the diet for when children are doing well they will consume what appears to be a monotonous diet with relish. Increase the diet cautiously; "haste makes for wasting." A sample dietary regimen is provided. It is convenient to arrange the diet in stages so that one may pass from one stage to another, forwards or backwards, according to the course of the child.

Sample diet ingredients are protein milk or milk from which the cream has been removed, junket or curds, dextri-maltose, orange juice diluted with equal parts of water and sweetened with glucose or dextri-maltose, oleumpercomorphum or other cod-liver oil concentrate, and vitamin B complex.

First Stage: Vitamin B complex before each feeding.

7:00 a.m.—10 ozs. of milk plus 1 tablespoon of dextri-maltose, cod liver oil concentrate.

9:30 a.m.—4 ozs. of orange juice and water.

12:00 noon—6 ozs. of milk plus 1 tablespoon of dextri-maltose.

3:00 p.m.—same.

6:00 p.m.—same.

Second Stage: Same as first stage plus curds or junket, one custard cup a day, increasing gradually to 3 times a day.

Third Stage: Same as second stage plus ground lean meat, 2 tablespoons once a day; very ripe bananas or banana flakes equal to 2 bananas a day; an increasing amount of dextri-maltose in the milk gradually up to 6 tablespoons a day.

Fourth Stage: After a prolonged period of well-being of several months' duration has been enjoyed, satisfying the appetite with foods listed above, the following foods may cautiously be introduced, one at a time, in small amounts: pureed baby foods, particularly meats, applesauce and simple vegetables such as squash and carrots; then boiled or poached eggs may be tried, using the entire egg. The last items of food to be added to the diet, and then only after 6 months of good health, are the starchy foods such as potatoes, rice, macaroni, spaghetti, bread and puddings. These are the most likely to give difficulty and make the least contribution to a well balanced diet. In mild cases the entire sequence of events

in the treatment may be somewhat shortened. Usually haste will cause one to lose more ground by precipitating a recurrence of symptoms after a period when all seems well. The moderately severe and severe patients follow roughly the time schedules outlined, and frequently three or four years pass before a complete normal diet can be enjoyed with impunity. Occasionally, even a longer period elapses.

Finally the physician would be well advised to avoid premature adoption of tentative proposals which claim to segregate from this group individuals with particular types of indigestion, such as starch intolerance. However, Howland in 1921 called particular attention to the group of individuals with prolonged intolerance of carbohydrate.⁵ There is much merit in this idea, and its practical significance is included in the above regimen. More clear definition of the details of intestinal indigestion will be required before a more specific understanding and rational therapy can be developed.

BIBLIOGRAPHY

1. May, C. D., and McCreary, J. F.: Absorption of vitamin A in celiac disease; interpretation of vitamin A absorption test. *J. Pediat.*, xviii:200-209 (February) 1941.
2. Farber, S., Schwachman, H., and Maddock, C. L.: Pancreatic function and disease in early life; pancreatic enzyme activity and celiac syndrome. *J. Clin. Investigation*, xxii:827-838 (November) 1943.
3. May, C. D., McCreary, J. F., and Blackfan, K. D.: Notes concerning cause and treatment of celiac disease. *J. Pediat.*, xxi:289-305 (September) 1942.
4. Parsons, L. G.: Celiac disease; Rachford memorial lectures. *Am. J. Dis. Child.*, xliii:1293-1346 (May) 1932.
5. Howland, John: Prolonged intolerance to carbohydrates. *Tr. Am. Pediat. Soc.*, xxxiii:11-19, 1921.

ACUTE DIARRHEA IN CHILDREN

Irving H. Borts, M.D., Iowa City

Diseases of infants which have their potential origin in water, aside from fluorosis and cyanosis, are those primarily of the enteric group, such as typhoid fever, Salmonella (paratyphoid), Shigella dysentery, Shigella paradysentery and other closely allied micro-organisms (paracolon). However, virus dysentery and poliomyelitis must not be overlooked.

Enteric infections in children under 1 year of age in the United States rank fourth as a cause of illness and second as a cause of death. Hardy, *et al.*, in their studies on bacillary dysentery in the United States have indicated that a varied reduction in this disease has occurred up to 99 per cent in regions of high living standards, whereas there has been little or no decline in densely populated areas of low economic status. On a world wide basis, acute diarrheal diseases still remain as the greatest single cause of infant mortality.

Although the spread of polio is uncertain, water and sewage have been pointed out as potential sources in the presence of outdoor toilets and where the water supply protection and sewage disposal is inadequate. That insects might be implicated in the spread is suggested by the fact that the disease appears in the summer months when insects are active and markedly diminishes as frost kills them off. It has been shown that mosquitoes can be artificially infected with the polio virus.

Little was known about virus dysentery, which was thought to involve only the newborn, until Reimann and his associates at Jefferson Medical School, Philadelphia, in 1943 followed a widespread outbreak of the disease. They found that infection developed when Berkefeld N. (normal) filtrates from the diarrheal stools were inoculated intranasally into mice. Inoculation of filtrates into young calves failed to reproduce the disease. Of 21 human student volunteers who inhaled nebulized stool filtrates, 11 developed typical symptoms within four days. Of 32 students who inhaled nebulized filtered garglings of infected persons, 17 developed diarrhea. In contrast to this, in 15 students who swallowed 3 cc. of filtered garglings placed in double-walled capsules, infections did not take place. Similarly, in 5 students who swallowed capsules containing stool filtrate and four containing patient's serum, infection did not occur. From these experiments it is evident that the disease is caused by a virus and spread by droplet spray, possibly by water, milk and food.

The writer experienced several outbreaks of virus dysentery among newborn in an institution in 1942. At the onset of the first episode the nursery attendant left for a visit elsewhere, and with appropriate sanitary measures directed toward better handling of the nipples, bottles, formulas and more careful disposal of the stools, the outbreak promptly ceased. Upon return of the nursery attendant about a month later, new cases promptly developed, suggesting the possibility of a human-carrier state. Following her removal elsewhere in the hospital, the illnesses again disappeared.

With improvements in the sanitary handling of food, the use of modern-treated water supplies and the sanitary disposal of human body wastes, a marked reduction in cases of typhoid fever and carriers has taken place. As a result, typhoid is not only becoming rare in children but in adults as well. Typhoid in children, like that in persons beyond 45, is more apt to be atypical than typical; hence, missed cases may become carriers

with resulting food and water contamination. However, we must not overlook the fact that carriers are of little danger to a community when they are known to health authorities and are pledged to refrain from handling food for other persons' consumption and to use a sanitary toilet. Water is becoming less and less a source of typhoid fever in the United States. Most cases and outbreaks are traced to food handlers who are carriers. That speaks well for the improvements made in the sanitation of water supplies. To my knowledge there has not been a case of typhoid definitely traced to water in Iowa in the past 20 years. Last year in Iowa only 46 cases were reported, whereas there were 3,062 reported for the entire United States.

Shigella dysentery and Shigella paradysentery comprise a number of species, of which the pathogenicity and mortality vary widely. These organisms as a rule are so extremely sensitive to temperature and environmental changes that they do not live long outside of the human body. Thus, water is a rather unlikely mode of transmission.

Of increasing importance are species belonging to the Salmonella or paratyphoid group. Twenty years ago there were about 10 known species of paratyphoids. Today there are over 160 Salmonella species which may infect man. The antigenic complexity of this group is such that few laboratories are prepared to make a complete antigenic analysis essential to species identification. To date 38 ohne Hauch and 70 Hauch antigens have been accepted as representative of the Salmonella group. By way of example, we recently encountered an acid and gas producing culture from the stool which agglutinated with ohne Hauch typhoid and S. paratyphi B (*Salmonella schottmülleri*) sera but on complete antigenic analysis proved to be Salmonella Panama. In view of the complexity of the antigenic structure of the Salmonella group and the vaccination of millions of people against typhoid, paratyphoid A and B fevers, agglutination tests on human patients' blood is frequently more confusing than valuable. Of specific value is the isolation of the infecting organism from the blood stream or stool of the ill patient and from that of carriers. Special stool culture containers are available at the laboratory. Care in collecting the stool specimen as well as the use of freshly prepared stool containers is mandatory.

Salmonella are gram-negative, nonspore forming bacilli, usually motile with peritrichal flagella, which grow well on ordinary laboratory media; form acid and gas from dextrose, mannitol, mal-

tose, and sorbitol; do not attack lactose, sucrose, or salicin; and do not form indole nor liquefy gelatin.

The sources of *Salmonella* infections in man are from domestic animals, birds, rodents, wild fowl and man himself. So widespread are the carriers of this group of infections that control will be extremely difficult, save for those species such as *S. paratyphi* A and B which infect man only. In view of the widespread nature of carriers and the resistance of the *Salmonella* microorganisms to environmental changes, infections due to water, milk and food not properly safeguarded are quite frequent. This is particularly true on farms, and in rural areas and small towns. On farms, chickens, ducks, geese, hogs, sheep and other animals are often permitted around wells of inadequate construction; thus, contamination is frequent, directly and by surface water pollution. It has been shown that 70 per cent of the rural well supplies in Iowa are unsatisfactory.

Fortunately for the patient, a fair share of the *Salmonella* remain localized in the gastrointestinal tract and do not invade the blood, spinal fluid or other tissues. As a result, severe or transient diarrhea may be the only outstanding symptom. Those which invade the blood, spinal fluid and tissues, other than the gastro-intestinal tract, may be extremely severe and fatal. Fatal cases are more apt to occur among the group under 1 year of age.

Analysis of 1,000 cases reported by Seligman and his associates showed stools were positive in 833, blood in 123, pus in 13, spinal fluid in 15 and miscellaneous sources 35. *Salmonella choleraesuis* was the most invasive, and 16 of 48 cases infected with this species ended fatally. Of 5 cases of endocarditis noted, 3 were due to *S. choleraesuis*, 1 to *Salmonella thompson* and 1 to *Salmonella typhimurium*. In all, 38 different species of *Salmonella* were isolated from these cases of which 36.9 per cent were *S. typhimurium*; 9 per cent were *Salmonella Newport*, *S. choleraesuis* and *S. paratyphi* B; 6.8 per cent were *Salmonella Oranienburg*; and 4.8 per cent were *S. montevideo*.

Since there are so many species and there is little if any cross immunity, a person may suffer from many attacks of diarrhea, etc., of *Salmonella* origin.

The great majority of diarrheas "going around" are chiefly of *Salmonella* origin. The majority may last one day or two and be mild in nature, but on the other hand may be severe and require hospitalization for several weeks.

To date 14 different *Salmonella** species have been identified in Iowa. They are as follows:

- S. paratyphi* B (*S. schottmülleri*, Para B)
- S. paratyphi* (Para A)
- S. bredeney*
- S. choleraesuis*
- S. derby*
- S. meleagridis*
- S. montevideo*
- S. Newport*
- S. Oranienburg*
- S. Panama*
- S. pullorum*
- S. sendai*
- S. senftenberg*
- S. typhimurium*

*Since the submission of this paper, *Eberthella typhosa* has been reclassified and designated as *Salmonella typhi*.

IMMUNIZATION PROCEDURES BROUGHT UP TO DATE

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The active immunizations most frequently used in private practice are smallpox vaccination, pertussis, diphtheria and tetanus inoculation.

Smallpox vaccination may be done at any age after the cord falls off and the umbilicus is healed. Ordinarily, I vaccinate infants at the age of 4 months. I always vaccinate them on the left arm by the multiple pressure method and do not cover the area. If the infant is vaccinated at this age, he does not have muscle coordination developed sufficiently to scratch the sore with the other hand, while he does have the ability to reach practically any portion of his leg. Another reason for preferring the arm is that it is a much cleaner site than the leg on a diaper baby.

An indication for postponement of vaccination is a rash on either baby or mother. An eczema baby could very readily inoculate his face with vaccine and have multiple takes, which not only would make permanent vaccination scars but could even cause death. If the mother has not been vaccinated, she too may be seriously inoculated in an acne or a scabies. Here in Des Moines, examples of these various accidental inoculations have occurred. One eczema child had over 30 full-sized vaccination takes at one time on his arm, neck and face. Another child carries a vaccination scar on the tip of his nose. Recently a mother vaccinated herself on both cheeks from her baby's take. One need not fear postvaccinal encephalitis as it has not occurred, to

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my knowledge, in children who were vaccinated under the age of 2 years by the multiple pressure method.

A vaccination that does not take does not protect against smallpox nor is it any evidence of immunity. If a vaccination does not take, the physician should assume that it is his fault and secure some fresh vaccine, repeating every two or three weeks until a successful take is obtained. Revaccination at the ages of 6 and 12 years is advisable.

As an infant has no immunity to whooping cough, it is safer to give pertussis vaccine by the fourth month. It has been found that vaccines containing 20,000,000,000 killed bacteria caused considerable reaction and those containing 10,000,000,000 were not too efficacious. So we use a Sauer's pertussis vaccine of 15,000,000,000 per cc. One cc. is given in the right arm at 4 months of age. Three weeks later, 2 cc. are given, 1 cc. in the left and 1 cc. in another area of the right arm. Three weeks from this date, 3 cc. are given, 1½ cc. in each arm, being careful not to inject it into a previously used area.

Vaccine reaction may occur with localized redness, tenderness and fever in the arm or even generalized symptoms of fever and restlessness about five to eight hours after the injection. Booster injections of 1 cc. Sauer's pertussis vaccine annually for four or five years keep the immunity to whooping cough at a much higher level.

Most infants are immune to diphtheria for nearly a year. The youngest clinical diphtheria patient I have ever seen was 11 months of age. It has been thought best not to try immunizing an infant until he begins losing some of his natural immunity at 9 months. There are advocates for the combination of diphtheria toxoid with the pertussis vaccine at three or four months. If a child of 8 months has not had pertussis vaccine, I give the combination pertussis and diphtheria and tetanus toxoid, administering 1 cc. in each arm every three weeks for three times. There are no reactions, no lump in the arm nor sterile abscesses. Alum precipitated toxoid is highly recommended in the literature and by the Academy of Pediatrics Committee on Immunization Procedures as being more efficacious than fluid toxoid. It is probably best to use alum precipitated toxoid in clinics where it is necessary to give the most protection with the least number of injections. In private practice, however, the lump in the arm and an occasional abscess are deterrent to its use. A Schick test should be

given six months after the last diphtheria toxoid injection. If the Schick test is positive, one or two more injections should be given. The Schick test should be repeated at 6 years and 12 years. When either form of toxoid is used, only about 3 or 4 per cent will need further inoculation as shown by the Schick test six months after inoculation. It is rare to find a positive Schick at 6 or 12 years after it has once been negative. The use of a booster shot is advocated by the American Public Health Association instead of Schick testing and may be best for mass immunization. In a well controlled private practice, however, a Schick test will give concrete evidence of the need or lack of need for more diphtheria toxoid. It is safer to know the test than to consider that one booster injection might be sufficient to immunize the patient.

Tetanus toxoid can well be combined with the diphtheria toxoid at 9 months. Booster injections should be given at the time of each accident that would ordinarily require prophylactic antitoxin injections. Booster injections may be given every year or two and should be repeated at least every three years. All allergic children especially should be immunized against diphtheria and tetanus as horse serum antitoxin is the only alternative when the nonimmunized are exposed to or contract either of these infections. Some way of marking the child who has been immunized should be devised. Dogtags and tattoos have been suggested. The purpose of this is to make sure the child will not be given antitoxin unnecessarily.

Scarlet fever inoculation may also be given without fear of the severe reaction encountered a few years ago when we gave five weekly injections of Dick's toxin. Anytime after 18 months, probably at about 4 years of age, three intradermal injections of tannic acid precipitated streptococcus toxin of 750, 3,000 and 10,000 units may be given at two or three week intervals. Considerable protection is given by these inoculations, and epidemics can be checked by their general use in a community.

Typhoid and paratyphoid vaccine should be given to all children at 10 or 12 years of age. This is the age of camping and picnic excursions, when the child first departs from the watchful eye of the mother and begins to drink water and eat food in unsupervised areas. Every boy or girl that is planning on going to camp should be given typhoid vaccine.

Active immunization by subcutaneous injection of influenza A and B vaccine is reported to be successful in some military camps. It is not to be recommended for infants and young children.

It is impractical because immunity is short, perhaps four to six months, and the vaccine only contains A and B virus, and there are many other strains of influenza virus. Thus, injections would need to be given two or more times a year to only hope to protect against two of the many strains of the influenza virus. Undesirable local reactions may occur in children which may be due to a comparatively large dose of vaccine given or sensitivity to egg. The influenza virus is grown on fertile eggs to which a considerable number of children are allergic.

Pasteur treatment should be given to contacts of a rabid animal.

Passive immunization has long been used for diphtheria contacts. A dose of 1,000 to 2,500 units of diphtheria antitoxin may be given to susceptible contacts of diphtheria. Fifteen hundred units of tetanus antitoxin should be given to anyone receiving a puncture wound, gunpowder burn, severe burn or compound fracture, who has not been immunized by the tetanus toxoid.

Convalescent serum as it is made at the Iowa State Health Department Serum Center is of definite value for children exposed to measles. Five or 10 cc. of convalescent serum, if given the third or fourth day after exposure to measles, will usually prevent the measles. A larger amount on the fifth or sixth day can also be expected to prevent the infection. The healthy child over 3 years of age should have the measles modified rather than prevented. Five or 10 cc. of serum given on the fifth or sixth day will usually modify the infection. An immunity could thus be attained by a mild attack under controlled conditions. Four cc. placental globulin or 1 to 5 cc. gamma globulin may also be used.

Scarlet fever can be prevented by the use of the convalescent serum, 10 to 20 cc. intramuscularly on the third or fourth day of exposure, in a large percentage of instances. Scarlet fever antitoxin can also be used for passive immunization.

A pertussis hyperimmune serum is made by the State Department Serum Center by giving a number of students at Drake University and Grand View College a series of Sauer's pertussis vaccine injections and, after an interval, drawing blood for serum processing. All infants under 1 year who are exposed to whooping cough should have 20 to 60 cc. of the hyperimmune serum in divided doses of 10 to 20 cc. every few days. All infants are susceptible to whooping cough. The serum can also be used to modify the disease after it starts.

There is no recommended immunization ma-

terial for poliomyelitis, epidemic meningitis, mumps, chickenpox or German measles.

Bacillus Calmette Guérin vaccine for tuberculosis has been recommended for infants in some countries. It cannot be recommended for private practice here until some responsible organization, controlled or checked by the National Institute of Health, takes over the production of the vaccine.

Each child should have a complete vaccination and immunization record in compact form. The parents should keep this record and have every physician enter each immunization procedure as it is done. The school requests such a record when the child enrolls in kindergarten. Questions of contact with contagious diseases and of keeping up on immunizations can all be answered by a well kept record.

I believe that immunizations are lowering the death rate of children. Of course, there are several factors such as penicillin and sulfa helping, but, in the 1946 report of the Metropolitan Life Insurance Company, contagious diseases were no longer the leading cause of death in children. There were 5,000 deaths a year from contagious diseases and over 6,500 deaths from accidents.

BANDL'S RING: REPORT OF CASE

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Scanty, indeed, is the literature in the past decade on the subject of Bandl's ring, which may certainly be classified as a major obstetric complication.

Historical

The literature dates back to 1743 when Smellie¹ reported the case of a parturient five days in labor in whom the cause of dystocia was the presence of two uterine rings in tetanic spasm. Craniotomy was finally performed. Because of the nature of the condition, I quote from Smellie's original contribution in 1779: "... head was low in the pelvis, and I tried to deliver her with forceps but was surprised that I did not succeed when I found that the head was not large, the instrument so easily introduced and firmly fixed." He prepared a craniotomy and fastened a hook in the skull but could not with all his strength bring it along. After removing the skull bones, he "... found the under part of the uterus strongly girt or contracted round the neck of the foetus. This I gradually dilated, bringing down one of the arms, and pulling on that and the shattered bones and scalp with both my hands,

I at last extracted the child with greater ease than I had expected. In pushing up my hand to dilate, my fingers passed the mouth of the womb that was girt around the middle of the head, when I was surprised to find another contraction before the shoulders."

The ring, *per se*, was next described by Braune in 1872, but he thought it occurred at the junction of the cervix and the body of the uterus. A few years later, Bandl placed the level of this ring at the junction of the upper and lower uterine segments. Schroeder drew attention to the formation of a ring in normal unobstructed labor and called it a "contraction ring." Bumm, Von Rosthorn and others believe that a contraction ring is evident on the inner surface of the upper segment as part of normal uterine function. On the other hand, Veit and Whitridge Williams, among others, do not believe ring formation to be a process occurring in normal labor and say that all such rings are true retraction rings.

For the modern view of the contraction ring, we are indebted to Clifford White, whose paper, published 34 years ago, gave the first ordered and reasoned survey of this subject and still remains the standard description of the American writers. Harper is outstanding, and in view of his observations, together with the work of others, most clinical manifestations of labor obstructed by rings may be attributed to a variation of behavior of Bandl's ring, dependent on the advancement of labor.²

Nomenclature

Confusion has reigned supreme on this subject because of the nomenclature.

A *tetanospasmodic uterine ring* is a band about two inches in width, composed of circular uterine muscle fibers which are in tetanic spasm, completely or incompletely surrounding the uterine wall, narrowing the lumen of the uterus, and which does not retract, preventing the propulsion of the fetus. One or more such rings may be present in uterine ring dystocia.

A *retraction uterine ring* is a band about two inches in width, composed of circular uterine muscle fibers, located in the upper uterine segment, completely or incompletely surrounding the uterine wall, narrowing the lumen of the uterus during a contraction, but which retracts and relaxes periodically during normal labor, aiding in the propulsion of the fetus. One or more such rings may be present in normal labor.

A *normal Bandl's ring* is a retraction ring located at the beginning of labor about 8 cm. from the external os and is a part of the upper uterine segment, separating the latter from the lower

uterine segment. This ring rises in the uterus with the advancement of labor.³

Anatomy or Physiology

The physiologic division of the uterus into an upper and lower uterine segment was first definitely established by Braune in 1872. Bandl emphasized and popularized the occurrence of this ring in labor, with the result that the designation "Bandl's ring" is now used for normal and abnormal labors.

A ring is not demonstrated by external inspection in Caesarean sections but is found only after hysterotomy when difficulty is encountered in attempting to extract the fetus from the uterine cavity. The ring is found behind the symphysis pubis and below the firm attachment of the peritoneum on the anterior uterine wall.⁴

Clinical experience demonstrates that the majority of intra-uterine rings are located behind the symphysis pubis, yet Rudolph in 1937 relates that in his series of cases the intra-uterine rings have been behind the symphysis, about 7-8 cm. above the external os. This has also been the author's experience. It is the opinion of Barbour, Duncan, Veit and Berkeley that intra-uterine rings are at or near the internal os.

In over 75 per cent of the cases recorded, the constriction ring is behind the symphysis pubis; hence, the physiologic retraction ring (junction between the two uterine segments) *is not the site involved*. Conversely, the pathologic retraction ring is the result of mechanical dystocia and an exaggeration of the physiologic retraction ring, which is analogous to the ring of Bandl.

Etiology

Endeavoring to ascertain the etiology, the following were considered⁵:

1. Menstrual irregularity—Normal menses in 70% of cases reviewed.
2. Toxemia—Not in evidence in 90% of cases studied.
3. Syphilis—Seronegative in 66%.
4. Age—Average, 24.3 years.
5. Parity—Predominantly in primiparas (85%).
6. Type of pelvis—Roentgenologically normal in 70%.
7. Length of labor—Prolonged first and second stages (80%).
8. Analgesia—Not more than normally used.
9. Premature rupture of bag of waters:
 - a. Prematurely 2 to 72 hours before labor—25.0%.
 - b. During first stage—14.0%.
 - c. At complete dilation of cervix—41.6%.
 - d. Not recorded—19.0%.
10. Intra-uterine manipulation and rectal examination—Average of 4 rectals.
11. Malpresentations—34% abnormal.

Pathology

Annular uterine rings are spasmodic and permanent in character. Rudolph in 1937 discussed histologic examinations made on specimens and was able to demonstrate that the transverse muscle fibers are markedly more numerous and thicker than those found in the central sections. The longitudinal muscle fibers are definitely less nu-

merous and show only a moderate degree of tortuosity; they are not as short and thick as those found in the controls. Histologic changes are in keeping with the physiologic changes. That a permanent constriction ring is not due to spasm is indicated by the fact that it persisted after death or hysterectomy.

Diagnosis

In the presence of prolonged labor with the absence of its usual causes, speculation should be high for a constriction dystocia. An absolute diagnosis can be made only by an intra-uterine examination.

The picture presented is one of an exhausted mother, with perhaps 1 or 2 degrees of fever, a pulse rate of 110-130 per minute, and a previously ruptured bag of waters. A low grade puerperal sepsis is taken for granted.

A normal cephalopelvic relation, position and presentation should be ascertained to rule out the possibility of a mechanical dystocia.

The diagnosis consists in acknowledging that the uterine contractions may be variable in intensity, duration and frequency. Tetany may even be present in the upper uterine segment with atonia in the lower segment. No change in the station of the presenting part, associated with looseness of the fetal head in the pelvic cavity during the second stage of labor, is almost pathognomonic. The laxity of the cervix and lower pole during a contraction is characteristic of constriction ring dystocia. The external os does not contract or become tense during a contraction as during a normal uterine contraction. It has been the author's experience that with nearly complete dilation the hand can be passed easily through the external os during a contraction, but resistance is met about 6-8 cm. above the external os. The flaccidity of the lower pole is outstanding.

Prognosis

Constriction ring dystocia is one of the gravest of obstetrical complications, and the prognosis for mother and child is always poor. The maternal mortality of 408 cases was 60 deaths or 14.7 per cent. The fetal mortality was 196 deaths or 47.2 per cent.

Treatment

With heavy labor in the first stage, especially in those primiparas who lose the bag of waters early, one must suspect an abnormal ring. The English literature cites cases where bags were inserted for dilation or forceps applied, and a heavy traction weight was tied to them while the

patient was held under deep anesthesia to "tire out the ring." In the United States, it has been customary to use deep anesthesia and try to tire out and manually dilate the ring. We attempt to correct the fetal obstruction, which is frequently a faulty vertex position. Rucker first introduced the use of adrenalin hypodermically to relax the ring. Pendleton (Kansas City) has used both adrenalin and ephedrine with varying degrees of success.⁶ The Bandl's ring frequently changes from normal to abnormal in a patient while the unsuspecting doctor loiters near.³

Caution frequently makes the diagnosis. Lucky indeed is the woman where caution overcomes impetuosity, when art overcomes dogmatism, for skill can now solve the problem where brute force would do damage.

Since 1937, McKenzie (Minneapolis) has set up a standard routine when the diagnosis has been made:

1. Morphine sulphate, $\frac{1}{4}$ grain (hypodermically).
2. Ether to deep surgical degree.
3. After deep surgical anesthesia, 0.5 cc. adrenalin, repeated in five minutes.
4. Midforceps, if necessary.
5. Ergotrate ampere 1 i. v. to combat excessive bleeding.

If after five or ten minutes there is no evidence of relaxation of the constriction ring, the anesthesia is stopped, and the patient is put on conservative management of watchful expectancy, with caesarean section as a last resort.

Case History

W.R.M., 22 years old, had a history of a previous normal full-term pregnancy. She had delivered a 6 pound 15 ounce female Nov. 22, 1947, following an uneventful prenatal course and labor, outlet forceps and prophylactic episiotomy being used. Two months postpartum, the patient had developed gallbladder symptoms. Cholecystography on Jan. 3, 1947, revealed a nonfunctioning gallbladder with stones, and cholecystectomy had been advised. Before surgery was performed, the patient became pregnant again. The last menstrual period was Jan. 15, 1947, and expected date of confinement was to be Oct. 22, 1947. Blood pressure readings throughout were normal.

Patient gained eight and one-half pounds up to Sept. 16, 1947. Urinalyses were negative at all times. Blood count was as follows: hemoglobin 12.5 gr.; red blood count 4,070,000; white blood count 9,100; polymorphonuclears 84 per cent; lymphocytes 14 per cent; monocytes 2 per cent; Kahn's test was negative. Prenatal course

was uneventful until Sept. 16, 1947, (eighth month of pregnancy) when patient came to the office complaining of a small amount of vaginal bleeding and a backache but on regular contractions. Roentgenologic studies for placenta praevia were negative. Fetus was in transverse position (R.D.P.); fetal heart tones were 132. Hospitalization was advised because of vaginal bleeding and possible premature labor. During the ensuing six days, backache became more severe, contractions were irregular, but bleeding had ceased. Labor pains were relieved with demerol hydrochloride, 100 mg. every two or three hours. There was spontaneous rupture of the bag of waters on Sept. 23, 1947, at 8:00 a.m. Vaginal examination was carefully made at 1:30 p.m. on Sept. 23, 1947, at which time a definite retraction ring was felt about 2.5 cm. from external os, which was dilated approximately 5 cm. Fetus was still in transverse position; fetal heart tones, 100 and weak; patient was weak and fatigued from labor, which had already been in progress 36 hours. It was decided to attempt manual dilation of cervix and contraction ring. The results were unsatisfactory until 5 minims adrenalin were given. Podalic version and extraction were accomplished with the patient in deep surgical anesthesia. The male fetus, six and one-half pounds, expired shortly after delivery. Postnatal course was uneventful.

BIBLIOGRAPHY

1. Smellie, William: Collection of preterm cases and observations in midwifery. W. Fraham, London, 1779. *J. Obst. & Gynaec. Brit. Emp.*, xl:6 (June) 1934.
2. Michael, W. A.: Bandl's ring as a cause of dystocia, with a report of 4 cases. *Am. J. Obst. & Gynaec.*, x:111-119 (July) 1925.
3. Pendleton, G. F.: Bandl's ring. *J. Missouri M.A.*, xxviii: 493-496 (October) 1931.
4. Rudolph, Lewis: Constriction ring dystocia. *J.A.M.A.*, cviii:532-538 (February 13) 1937.
5. McKenzie, C. H.: Contraction ring dystocia; an analysis of 36 cases, with observations on the use of adrenalin in 20 cases. *Am. J. Obst. & Gynaec.*, xxxiii:835-841 (May) 1937.
6. Weiss, Julius: Tetanospasmodic uterine rings, with a report of 4 cases. *Am. J. Obst. & Gynaec.*, xxvi:346-354 (September) 1933.

THE GENERAL PRACTITIONER IN THIS ERA OF SPECIALIZATION

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The position of the general practitioner today when the trend is toward superspecialization is a precarious one. In attempting to carry on the practice of medicine and surgery for which his training, ability and years of experience have fitted him, he is beset by a multitude of hitherto unknown obstacles, rules and regulations, fostered and inspired by apparently well-meaning board members.

It is becoming increasingly difficult for him to secure hospitalization for his patients because

of the shortage of beds, preference usually being given to specialists, and in any number of hospitals it is entirely impossible for him to gain entrance because only the patients of specialists are admitted. To add to his annoyance, he finds that the field of his endeavor in hospital practice is being limited more and more. Those things, which for years he had been doing so capably for his patients, he now can no longer do, the rule being that such-and-such procedures may be done only by a certified specialist in that given field. In many instances he is being deprived of the major portion of an income that should be his.

Today, to be a general practitioner seems to carry a stigma of inferiority, indicating a type of doctor whom no one would desire for his physician and certainly one whom no medical student would want to emulate. The student doctor, from being associated mostly with specialists, acquires the concept that ability and affluence go only with specialization and that to be the recipient of a large income requires certification by a given board. From the medical professors with whom he comes in contact, he does not learn that there are many large remunerative general practices, even more lucrative than those of some of the certified men in whose footsteps he is beginning to feel he must of necessity follow. Although in choosing his life work, he was impelled by the desire to aid the unfortunate, yet he does crave the nicer things of life which presume a sizable income. Unless the student is shown that the financial expectations in general practice are equal to those of the specialist, it is a foregone conclusion that the majority of them will seek to become specialists.

Responsibility for these conditions lies with the medical schools and colleges. Those who decide on medical curriculums tell us that it must be presented by specialists in each field in order to give students the best information obtainable and that, although this is done, still in no instance is specialization advocated. While such a program may not openly advocate specialization in so many words, yet in the manner of presentation of subject matter, whether unconsciously or consciously, we *do* have its advocacy. Theoretically, the deans may be right, that limiting the presentation of a given subject to one who specializes in that field does not of itself encourage specialization; however, practically, it is the reverse. Hence, the first question asked by the junior or senior medical student when he comes in contact with a new faculty man is: "Is he a board man?" or "When did he get his board?"

How do members of the average family feel

toward the specialist when they are obliged to seek medical advice? Do they like to be bandied about from one specialist to another until they verily believe that it is necessary to have a different doctor for every organ of their body? Definitely they do *not*. They prefer to go to someone who is willing to listen to their ailments and who is competent to treat their bodies as a whole, not piecemeal, some one single individual who appreciates the importance of considering the patient as a total personality, and in whom they may place their trust and confidence. They do not cherish the idea that they must display to a multitude their ills, which oftentimes seem to them to be weaknesses they loathe discussing, much less having known.

There is no surer way of fostering socialized medicine than to continue encouraging over-specialization, for specialization does away with the intimate doctor-patient relationship, so necessary to private practice. In addition, specialization adds to the cost of medical care in an era in which, even now, the most frequent complaint that we hear is the high cost of medical care; it is certainly more costly to have two or three doctors calling on a patient than to have only one doing so. Again, a system of medical practice which demands that all practitioners be diplomates of some given board but does not provide an opportunity for every medical student to become so certified cannot be sound fundamentally. If the requirements in vogue at present are to be in the "must" category of the future practitioner of medicine, then the chance to fulfill them should be available to all qualified doctors. Nevertheless, sufficient such openings to prepare for the various boards are not being provided today. The number of approved residencies which can be had now allows only about 2 out of every 8 or 10 graduates to continue and become specialists in any given field.

Furthermore, our present methods of developing doctors for specialization in a given field tend to turn out men who are not so highly trained as they might be. They lack the maturity which would not only influence them in their choice of a specialty but would also add to the efficiency of their acceptance of training. A medical student who interns for one year and immediately thereafter accepts a residency with the idea of fulfilling the requirements of some specialization board makes a snap decision and possibly an unwise one. As yet he is unfamiliar with the general practice of medicine and, therefore, is unable to determine definitely into what niche he would best fit or how his special talent

might be developed to advantage to himself and his community. His decision may be based on the trend of the times, "specialize or be lost." His choice may be the result of his devotion to some particular specialist, who for one reason or another has shown him consideration during his internship. Or perhaps his father or some other relative is a practitioner of that particular field.

As one considers this subject more fully, he may be tempted to suspect that in this great urge for increased specialization there is more involved than what is apparent to the casual observer—possibly a beginning monopoly by a small minority, an attempt to make the practice of medicine and surgery seem more difficult than it really is. The practice of medicine and surgery is no more strenuous than the effort required to make a complete physical and take a well-detailed history. Any doctor who has applied himself conscientiously during his course in medical school and his general internship of two years (three years are preferred), provided he is blessed with average intelligence and an ordinary degree of common sense, should arrive at the same diagnosis as the specialist. How well his surgical technique is developed depends upon the number of times he has done the operation, but it surely does not require five years of holding retractors to have him approach a mastery of this phase of surgery.

The trend toward specialization is not new. Almost half a century ago Sir William Osler was "amused to read and hear of the passing of the family physician." He it was who said the public bases its opinion of the medical profession on the general practitioner, who is the yardstick by which medical care is measured. Now that we are approaching the half-century mark, the plight of the general practitioner, that specialist in the broadest field of specialization today, is again occupying the limelight. In order to preserve the first line of defense against the onset of socialized medicine, many of our greatest organizations in medicine today, even some of the certifying boards themselves, have finally awakened to the fact that the present orgy of snubbing the general practitioner must cease. If the American system of the practice of medicine and surgery is to continue and flourish as such, without the hindrance of government supervision, the position of the general practitioner must be safeguarded. The general practitioners themselves, having just recently recognized the adage, "in union there is strength," have founded the Academy of General Practice and set up standards for maintaining membership in same. Some few hospitals have established general practice

sections in their staffs, and the American Medical Association has opened a general practice division in its organization.

But it remains for the medical schools of the country to come forward and do their part in this great program. Too few have done so as yet. The University of Colorado as well as the Universities of Minnesota and Kansas has established general practice internships: the University of Colorado, a three year internship, and the Universities of Minnesota and Kansas, a two year internship. The University of Louisville has established the first chair of general practice. The Bowmann Gray School of Medicine offers a course in family practice for the junior and senior medical classes. The University of South Dakota, for a limited period of time, during vacation at the end of the sophomore year, places the members of that class with a qualified practitioner in the rural area so that the student may observe and appreciate general practice in action. What these medical schools have pioneered in, other medical schools should follow. Every university hospital should offer a well organized general practice internship of two or more years. The teaching staffs of the various medical schools should place themselves on record as favoring the inclusion of a given period of general practice, following internship, as a prerequisite to specialized training. General practitioners should be appointed to the faculties of all our class A medical colleges, and their ability made use of, not only in the clinics but in the classrooms as well. The art of medicine, which often appears a lost art, is one subject in the depiction of which the broad experience of the general practitioner could be employed to greatest advantage in developing well rounded medical students.

In conclusion, while it is a recognized fact that we must have qualified, well-trained specialists, it is an equally evident truth that we need capable general practitioners, who are not hampered in their practice by unnecessary burdensome restrictions and who have full and free access to hospital facilities. What the proportion of specialists to general practitioners should be is a difficult question to answer. However, the proportion being what it is today, general practitioners should begin at once to assert themselves and take back their rightful place as leaders in their community. They should proceed with their organizing activities for working together as a single harmonious unit they can accomplish much more than individually. They should aspire to being elected to office in their county and state medical societies; seek to merit and obtain appointment

to medical school faculties, and having done so prove the fitness of their selection by their exact attendance to duty and careful advance preparation of the material to be presented; and, lastly, foster and strengthen the development of their section in the American Medical Association. In other words, to employ an old expression, "Let the tail no longer wag the dog."

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CLINICOPATHOLOGIC
CONFERENCE
January 12, 1949**

Summary of Clinical Record

The patient was a 37 year old white female, who was first seen in this hospital in the Department of Medicine on Jan. 22, 1948. Her chief complaints were recurrent attacks of upper right quadrant pain, radiating through to the back and right shoulder blade, at intervals of two to three months for the past 10 years and mild jaundice on two occasions. The local doctor had treated her for gallbladder disease for several years. She denied headaches and dizzy spells but did admit dyspnea on exertion for several years. Physical examination revealed an obese white female, weighing 208 pounds, with an arterial pressure of 244/146 mm. Hg. There was a loud systolic murmur in the aortic area. Urinalysis revealed 3 plus albuminuria and many hyalin and granular casts. The electrocardiogram showed evidence of myocardiac disease compatible with left ventricular hypertrophy. A radiograph of the chest showed generalized cardiac enlargement with a Danzer ratio of 0.55. A cholecystogram showed a poorly visualized gallbladder with several radiolucent stones. The blood urea nitrogen was 14.0 and the creatinine 1.2 mg. per 100 ml. The patient was given a 1000-calorie diet, phenobarbital 30 mg. three times a day and a supply of aminophylline suppositories for relief of pain. She was instructed to return in six weeks.

The patient returned on Feb. 26, 1948, reporting fewer attacks of abdominal pain and a weight loss of 20 pounds. The arterial pressure was 254/146 mm. Hg. Her general condition seemed otherwise unchanged. She was referred to the Department of Surgery for consideration of cholecystectomy. The surgeons advised reduction of weight to 150 pounds before any surgical treatment was undertaken.

The patient was next seen in the Department of Medicine on June 3, 1948. She had lost an additional 5 pounds, weighing 181 pounds. There had been no additional attacks of abdominal pain, but she had experienced some general malaise. Her last menstrual period had begun on April 3. She had had no bleeding since, and she thought she was pregnant. She reported having had some spots before her eyes. The arterial pressure was 265/140 mm. Hg. There was a trace of edema of the extremities, and the uterus was slightly enlarged, soft and movable. The other physical findings were unchanged since the previous admission. The blood urea nitrogen was 8.0, and the creatinine 1.0 mg. per 100 ml. The patient's doctor stated that an Ascheim-Zondek test done on May 14 was positive. She was not seen in the Department of Obstetrics during this admission, but an internist considered interruption of pregnancy and decided against it at that time.

The patient was admitted to the Obstetric Service on Oct. 1, 1948, complaining of intermittent vaginal bleeding since September 28. Her first pregnancy in 1938 had been terminated at eight months because of moderately severe toxemia with high arterial pressure and failure of vision. The child was stillborn. The second pregnancy in 1940 was complicated by hypertension and aborted spontaneously at five months. The third pregnancy in 1941, also complicated with hypertension, aborted spontaneously at four months. The fourth pregnancy in 1943 was uncomplicated and resulted in spontaneous delivery of a small male infant. The child was alive and well. The expected date of confinement of her present pregnancy was Jan. 12, 1949. The pregnancy had been relatively uncomplicated except for the vaginal bleeding that had begun three days before admission. The arterial pressure was 240/140 mm. Hg. The uterine fundus extended to one fingerbreadth above the umbilicus, and there was 2 plus edema of both ankles. The patient weighed 178 pounds. The fetal heart was heard just below the umbilicus. The patient was placed on bed rest and given a low salt, high protein diet and phenobarbital 90 mg. four times a day. An internist recommended no additional therapy. An ophthalmologist reported that the ocular fundi showed arteriovenous nicking, focal constriction of arterioles and one large cotton-wool area. The hemoglobin was 13.0 gm. per 100 ml., and the leukocyte count was 12,250 per cu. mm. The Rhesus factor was Rh positive. A radiograph of the chest showed cardiac enlargement.

The patient's general condition remained unchanged from admission until 1000 hours on October 3, when suddenly she complained of a frontal headache and inability to move the left arm and leg. The arterial pressure was 285/175 mm. Hg. She was incapable of voluntary motion of the left arm or leg. The tongue deviated to the left, but the brow wrinkled bilaterally. Increased reflexes were noted in the left extremities, and a positive Babinski sign was present on the left. At the onset of these symptoms, the patient was quite conscious and rational but had some difficulty with speech, which was attributed to partial paralysis of the tongue. She ate a hearty meal two hours after the onset of paralysis. During the afternoon she became restless, and her speech difficulties gradually in-

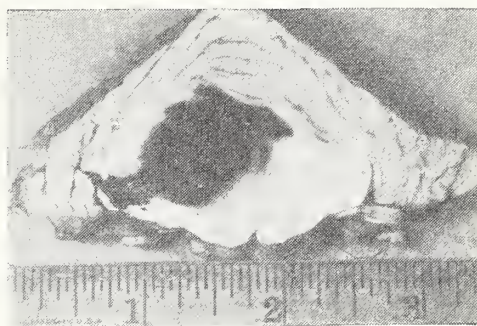


Fig. 1. Brain after fixation. Massive hemorrhage of pons and cerebral peduncle.

creased until 1600 hours when she became comatose. Arterial pressure continued to range from 270 to 280 over 160 mm. Hg. The patient's course was rapidly downhill. Respiration became labored, and frequent aspiration of the trachea was necessary. Her temperature rose gradually to 105.6 F. (axillary), respiration ceased and she died at 0300 hours on Oct. 4, 1948.

Dr. E. Plass (Obstetrics and Gynecology): This is such a cleancut case of hypertensive disease, complicated by pregnancy and terminated by some form of intracranial accident, evidently a hemorrhage, that even the obstetric staff was able to make the diagnosis before the internists were called. The rapid downhill course is that which we have seen in occasional patients who have suffered accidents of this character either before or after delivery.

Dr. S. Forbes (Radiology): We have one film of the patient's chest, taken in January 1948, showing only a moderate cardiac enlargement. This appears to be mainly left ventricle. At that time the patient had no evidence of pulmonary congestion. The base of the lung fields is not well shown in this film, but there was no pleural

fluid evident at that time. A film taken just before her death also showed no evidence of pulmonary congestion or pleural fluid.

Dr. W. Bean (Medicine): The probability is greater that she had no acute hemorrhage but either a sudden increase in edema, or what is known as an encephalopathy, from which she didn't happen to recover. If she had a hemorrhage, it is unlikely that she would have eaten a hearty meal. Ordinarily, victims of massive cerebral hemorrhage become comatose very rapidly.¹ The onset of symptoms is apt to be much more gradual with edema or a thrombus. So, clinically, although it is quite conceivable that she did have a hemorrhage, it is more probable that there was no acute vascular episode but, if there was an acute episode, that it was thrombotic and not hemorrhagic in nature. I would hazard a guess that she had no massive nor acute process in her brain at all but that an increase in the edema accounted for her death.

Clinical Diagnosis

Hypertensive cardio-vascular disease with pregnancy.

Necropsy Findings

The brain showed recent diffuse intracerebral hemorrhage involving the right mesencephalon, pons and cerebral peduncle, with extension into the fourth ventricle and subarachnoid space. There was severe generalized arteriosclerosis and arteriolosclerosis with conspicuous involvement of renal, coronary and cerebral vessels. The heart was greatly enlarged and showed myocardiac fibrosis. There was chronic passive congestion of the liver and spleen. Areas of partial collapse were present in both lungs. The thyroid gland showed microscopic evidence of atrophy. There was mild chronic cholecystitis with cholecystolithiasis. The cervix uteri was chronically inflamed and superficially ulcerated, and several small uterine leiomyomas were present. The uterus was enlarged and contained an apparently normal male fetus of approximately 6 months development. A large corpus luteum of pregnancy was present in the right ovary.

Necropsy Diagnosis

Intracranial hemorrhage, recent, with extension into fourth ventricle and subarachnoid space.

Arteriosclerosis and arteriolosclerosis, generalized and severe.

Cardiac hypertrophy and myocardial fibrosis.

Chronic passive congestion of liver and spleen.

Chronic cholecystitis with cholecystolithiasis.

Chronic cervicitis with superficial ulceration.

Leiomyomas of uterus.

Atrophy of thyroid.

Corpus luteum of pregnancy, right ovary.

Pregnancy, intra-uterine, estimated duration, six months.

Dr. F. W. Stamler (Pathology): The lesion was a brain hemorrhage. There was rather massive, quite recent hemorrhage in the brain stem, right cerebral peduncle and pons, with extension into the fourth ventricle and the subarachnoid space, although the ventricular and subarachnoid hemorrhage was not extensive. The brain weighed about 1,550 grams, but edema was not the conspicuous lesion. As is usually the case, we did not find any particular bleeding vessel to account for hemorrhage. There was, however, generalized sclerosis of the cerebral vessels of all sizes from the largest arteries to the small arterioles of the cerebrum. There was severe generalized

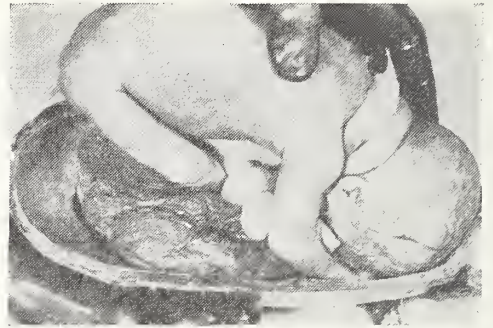


Fig. 2. Fetus in situ. Cord looped twice about neck and once about right ankle.

arteriosclerosis and arteriolosclerosis. This involved vessels of all caliber from the aorta to the small arterioles. It was not uniform in the extent to which the vessels were affected, although all organs examined did show some vascular disease. The lesions were more severe in some organs, especially the kidneys, heart and brain. The heart was greatly enlarged. It weighed 700 grams, and there was severe coronary sclerosis with extreme narrowing of the lumens of both the major coronary vessels and small branch vessels. There was chronic passive congestion of the liver and spleen. The liver weighed 3,300 grams, in comparison to about a 1,500 gram normal weight. The spleen was only moderately enlarged. There were areas of partial collapse in both lungs and some pulmonary congestion, but this was not extensive. The thyroid gland was small and showed microscopic evidence of atrophy. There was mild chronic cholecystitis with several stones present in the gallbladder. The cervix uteri was chronically in-

flamed and showed areas of superficial ulceration. The uterus was enlarged and contained a male fetus of approximately 6 months development. No abnormalities of the fetus or placenta were found, although the cord was looped about the infant's neck and foot. The uterus contained a few small leiomyomas and was in other respects unremarkable. There was a large corpus luteum of pregnancy in the right ovary.

Dr. R. Sheets (Medicine): What do the scars in the kidney imply?

Dr. Stamler: The few rather large stellate scars represent the areas of scarring and atrophy due to occlusion or severe disease of larger arteries, and the very fine scars are due to the lesions in the smaller vessels.

Student: How about the adrenals?

Dr. Stamler: The adrenals showed the same vascular lesions, but they appeared essentially normal in other respects.

Dr. R. Flocks (Urology): Was there any hydronephrosis or hydro-ureter, particularly on the right side?

Dr. Stamler: It was not conspicuous.

Dr. Flocks: It has been proved in our clinic by Dr. Lee and Dr. Mengert, and in many other clinics, that in a group of pregnant patients at the sixth or seventh month 100 per cent will show a considerable degree of hydro-ureter and hydronephrosis on the right side and 85 per cent will show at the same time a considerable degree of hydro-ureter and hydronephrosis on the left side. The cause of this has not yet been definitely determined. It is still controversial. Dr. Lee and Dr. Mengert showed that, even though any obstruction due to the enlarged uterus was overcome by means of ureteral catheterization, the hydro-ureter and hydronephrosis did not subside. This indicated that there was a definite hormonal factor as a cause of hydronephrosis. This was particularly true since as soon as the uterus was emptied there was almost an immediate decrease in the hydronephrosis and hydro-ureter, so that intravenous pyelograms made 48 hours after the emptying of the uterus showed no evidence of hydro-ureter and hydronephrosis.

Several years ago, in conjunction with one of the men in the Department of Obstetrics and Gynecology, a series of intravenous pyelograms were made in patients with toxemia or hypertension associated with pregnancy. The incidence of hydro-ureter and hydronephrosis in these cases in the last trimester of pregnancy was much lower, and the degree of hydronephrosis was much less. It was felt that there was something here, in conjunction with the hypertension or toxemia,

which counteracted the hormonal factor having to do with the production of the hydronephrosis in the last trimester of normal pregnancy. It is interesting in this case of hypertension associated with pregnancy that the pathologists noted no evidence of marked hydronephrosis or hydro-ureter. This fits in with the unpublished work which was done here several years ago maintaining that apparently the degree of hydronephrosis and hydro-ureter is much less in those cases in which hypertension is associated with the pregnancy.

Dr. Ben Wolverton (Cedar Rapids): Due to the obesity of this woman, I am wondering what her blood cholesterol levels were over the course of the five pregnancies.

Dr. Stamler: We have no record of her cholesterol levels. She was, of course, still moderately obese at the time the autopsy was performed.

Dr. Henry Hamilton (Medicine): Was anything abnormal found in the gallbladder?

Dr. Stamler: The gallbladder was chronically inflamed, and there were stones.

Dr. W. Bean: Perhaps I shouldn't have said anything about hemorrhage and thrombosis. However, in handling patients with hypertension, it is of much more than academic interest whether, in the presence of acute cerebral vascular accident, one is dealing with hemorrhage, thrombosis or acute edema because patients readily survive and recover from edema and may even be reasonably normal for a period of one year after hypertensive encephalopathy. Ordinarily, they do not recover from a hemorrhage. The chances of recovery from a thrombus may be fairly good, although it may be only partial. As a general rule, a patient who develops a vascular accident and goes ahead and eats a substantial meal is more apt to have something other than an acute hemorrhage. I doubt that the massive hemorrhage was present when she ate the large meal. I wonder, because of my experience at Cincinnati, that there wasn't some form of treatment employed to reduce her blood pressure. The results with toxemia of pregnancy associated with severe hypertension have been so excellent in the series of patients treated with *Veratrum viride* that I would like to hear Dr. Plass comment on the utility of that form of therapy. During my 11 years at Cincinnati, I recall but a half dozen patients who died with toxemia. Perhaps clinical material or some other factor determines this mortality rate, which is significantly better than most reported figures.

I was asked to discuss the relationship, if any, between hypertension and pregnancy from the

point of view of etiology. We are dealing with two separate phenomena. We know a lot about the cause of pregnancy but nothing final about the cause of hypertension. Hypertension, as we all know, is due to an increased peripheral resistance. That is associated with an increase of the tone or tension of the blood vessels and can be produced in one of two ways: by increased neurogenic impulse or by an increase in some humoral factor which produces an increased tension or increase in the muscular and elastic contraction. The term "toxemia" implies a humoral mechanism. Certainly, the term "toxemia of pregnancy" indicates that when the term was introduced it was on the basis of the belief that a humoral agency was involved. Recently, we have obtained a tool which is very useful clinically in discriminating between the neurogenic and humoral component of high blood pressure.



Fig. 3. Aorta. Photomicrograph showing atherosclerosis, with softening and intimal ulceration.

I refer to tetraethyl ammonium chloride. This material is relatively safe. It blocks the ganglionic impulses so that the neurogenic component of sympathetic tone is eliminated or substantially reduced. Recently, at the University of Cincinnati, a series of studies was made on pregnant or nonpregnant women, with or without toxemias of pregnancy, using this method of injection of tetraethyl ammonium chloride to measure the component contributed to the hypertension by neurogenic factors and that contributed by humoral factors.

See the article by Brust, Assali and Ferris² for the details which I will mention briefly in the discussion. When one takes a normal basal blood pressure on a patient who has been lying quietly flat in bed for a period of a half hour, repeating it at intervals, in normal nonpregnant women one gets a figure of about 115/70. When one injects tetraethyl ammonium chloride, the blood pressure falls. The systolic tension comes down to around 100, and the diastolic tension to a level

of about 60. During the last month of pregnancy, if one takes normal pregnant women who have no toxemia, their blood pressures in the recumbent state are essentially the same as that of the nonpregnant control group. There is, perhaps, a slight elevation of diastolic pressure, but it is of no great moment. However, when one injects tetraethyl ammonium chloride, there is a sharp fall in both systolic and diastolic pressure. Therefore, the so-called tetraethyl ammonium floor in normal pregnant women shows a sharp fall, which indicates that neurogenic tone is the strong factor in maintaining blood pressure in normal pregnancy and is apparently much more important than it is in normal nonpregnant women. I don't know the significance of this, but I think the observation in itself is clear enough. In toxemic women during the last month of pregnancy, the systolic blood pressure was approximately 170, and the diastolic was 110. When they were given tetraethyl ammonium chloride, they got a relatively meager fall, although it was quite definite, but it approached more nearly what happened in normal nonpregnant women than it did in normal pregnant women, where the neurogenic component compared to the vascular tone appeared to be most important.

From this, one might reasonably conclude that the larger element in vascular tone was contributed by a humoral or non-neurogenic factor in the presence of toxemic pregnancy. Within 48 hours following delivery, the normal group, which during pregnancy has this considerable neurogenic component and gets a sharp fall in blood pressure after tetraethyl ammonium chloride, now has practically the same response as normal nonpregnant women. With the determination of pregnancy or very shortly thereafter, the neurogenic component, which has been perhaps largely responsible for the levels of tension, has been replaced by some humoral factor, and the response to tetraethyl ammonium chloride has been reduced. On the other hand, patients with toxemia, who had had relatively small falls in blood pressure following the injection of tetraethyl ammonium chloride, after delivery get a rather sharp reduction, indicating that there has been a shift in the two forces which sustain blood pressure. They have a definite fall but still have hypertensive levels in the control reading, and now they get a sharp marked fall in the tetraethyl ammonium floor, which indicates that neurogenic factors are now more important than they were in pregnancy when toxemia was present. These studies have not been carried far enough for one to conclude what their ultimate significance will

be in determining the mechanism which causes toxemia.

One might discuss the problem from the point of view of the purely mechanical circulatory burden imposed by pregnancy. The circulatory change in pregnancy has been likened to the effects of an arteriovenous aneurysm, and many of the changes are, indeed, quite similar. There is an increase in cardiac output, widening of the pulse pressure and an increased rapidity of circulation, and the changes in venous pressure in the lower extremities suggest the changes which occur distally in a limb with an acquired arteriovenous aneurysm. The venous pressure is higher, partly from purely mechanical pressure but partly from dynamic circulatory change.

Patients with heart failure or heart trouble who go through a normal pregnancy ordinarily have greater risk of danger or difficulty of heart failure during the last trimester prior to the final month of pregnancy. As a rule, there is definite improvement in cardiac status during the last month of pregnancy. Whether this is related mechanically to the phenomenon of engagement and other changes is not clearly known. It is known that the risk of trouble from heart disease in pregnancy is much less during the last month. This has great implications for the management of pregnancy during the last trimester, when it becomes inadvisable to interrupt or interfere—if it is possible to bring the patient along to that stage—because a physiologic improvement takes place during the month prior to delivery. In the ordinary run of toxemia of pregnancy, there is usually no spontaneous improvement in toxemia in the last calendar month of pregnancy in contradistinction to that which takes place in the presence of heart lesions and heart failure; so we can say that the mechanical burden on the circulation cannot be the factor which produces toxemia and hypertension. Since we don't know the cause of hypertension unassociated with pregnancy, we can only speculate on whether or not there is a specific effect of pregnancy on pre-existing hypertension or whether there is a specific situation where pregnancy initiates in a previously normal person a hypertension which might not have occurred otherwise. That is, of course, the critical and crucial question which confronts us, and I am sorry that I can give you no answer. It is my impression that we have not yet eliminated the possibility that there is a specific influence related to pregnancy *per se* which accelerates or aggravates or perhaps may even initiate the renal lesion and the other lesions which ultimately produce full fledged hyperten-

sion and finally lead to fatality, which they did in this instance.

Dr. Flocks: The work which Dr. Bean has just described, illustrating the differences in the reaction of tetraethyl ammonium salts upon hypertension in pregnancy and also upon the hypertension associated with pregnancy, fits in with our findings of the difference in the hydronephrosis of pregnancy. In those cases of pregnancy which are associated with hypertension, it may well be that the use of these salts may help us elucidate the mechanism of production of hydronephrosis in pregnancy. I believe that this work is extremely interesting in relation to these patients.

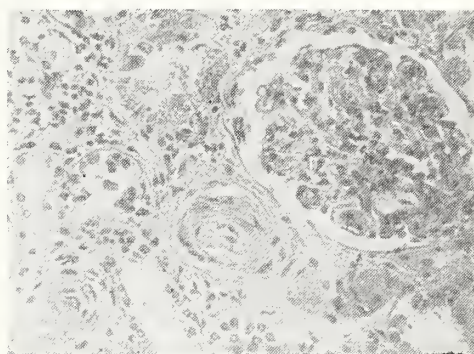


Fig. 4. Kidney section. Photomicrograph showing arteriolar sclerosis.

Student: In view of her age, previous pregnancy record and marked hypertension, why did they decide not to interrupt the pregnancy?

Dr. Plass: That was the decision of the medical department.

Dr. W. Paul (Medicine): The reason she was not interrupted was the fact that on the obstetrical service the past few years we have seen few or no deaths in people who carry some degree of hypertension. We found out a long time ago that pregnancy did not influence hypertension which was present prior to the pregnancy. If the individual suddenly gets exacerbation of hypertension and can't be controlled, then the pregnancy should be interrupted. This woman was obese, it was early in her pregnancy and she had no untoward signs; and we found that most patients similar to this one go along to term with little or no trouble. If about the sixth month, they begin to show changes in the fundi, some degree of edema and begin to show some cotton-wool exudate, then and only then can they be interrupted. If this woman had done carefully what her local physician wanted her to

do, I don't think that much of anything would have happened. One question comes to my mind. What is the incidence of hemorrhage in all true hypertensives? This woman had arteriosclerosis involving all the vessels. Wasn't she a fit candidate for hemorrhage or thrombosis anyway, with or without her pregnancy? Was the pregnancy the actual precipitating mechanism in this case or was it coincidental? When she was first seen in the Medical Out Clinic, there was no occasion to interrupt at that time.

Dr. Plass: Dr. Bean seems to be troubled by the fact that this patient ate a meal after she presumably suffered the hemorrhage. This raises the possibility that any woman as obese as she would eat a meal on any occasion. I had forgotten when Dr. Bean started this discussion that he came from the Veratrum viride "capital of the world." I may add for his information that we used Veratrum some 30 or 35 years ago when I was still in Baltimore and gave it up as being too dangerous. We are quite aware of the fact that in Cincinnati they are now having remarkable results with its use but so far have not seen fit to introduce it here. As a matter of fact, I have always doubted the advisability of making efforts therapeutically to lower the blood pressure in patients of this sort because, as Dr. Bean admits, the hypertension is a protective device. We have been cautious about inducing too great a lowering of the blood pressure for fear that it might in itself produce damage. I should like also to point out that pregnancy did not increase the blood pressure in this patient. As a matter of fact, blood pressure readings were, if anything, slightly lower after conception than previously. That has, by and large, been the experience over the country with a large group of patients with hypertension and a complicating pregnancy. The best figures I know are those developed some two years ago in the Jersey City Medical Center where they studied over 200 hypertensives who had gone through one or more pregnancies. They found that about 40 per cent of these patients had a definite lowering of the blood pressure about the middle of pregnancy which persisted until near the end of the gestation period. This series of cases from the Margaret Hague Hospital also points rather definitely to the conclusion to which we are slowly coming here, that pregnancy does not essentially alter the course of hypertension.

From the purely practical standpoint, it is well that the question has been raised, "Why wasn't this pregnancy interrupted?" I'm not at all

sure that it would have made any difference in the outcome. This is the second hypertensive patient I can recall who has died from cerebral hemorrhage. The other woman died four days after pregnancy was interrupted, and at the time we naturally felt that the insult of interruption was responsible for the hemorrhage. In this instance, there was no surgical intervention, and still the patient died in the same fashion. I am inclined to believe that the pregnancy had nothing to do with the fatal outcome, but that some other circumstance sometime in the near future would have led to the same outcome if she had not succumbed when she did.

Dr. Paul: Was the fetus too young to survive at the time of the mother's death?

Dr. Plass: Obviously we didn't weigh it because it was fixed before the uterus was opened. The over-all length of the fetus was about 30 cm. The crown-rump length was 20 cm., which indicates 24 weeks development. The average weight of a fetus at 24 weeks is something in the neighborhood of 600 or 700 grams. The possibility of survival of a child that small is obviously low. I think no harm was done by not removing the child surgically. Obviously, a major operation would have been necessary to terminate the pregnancy.

Dr. Warner (Pathology): I'd like to ask Dr. Plass about relative incidence of toxemia in hypertensive versus nonhypertensive phases. Leaving out the risk from the standpoint of hypertension, how much more likely is the hypertensive patient to develop toxemia of pregnancy?

Dr. Plass: If one subscribes to the idea that there is such a thing as toxemia superimposed on chronic hypertension, it appears that about 30 per cent of hypertensives fall into that class. If the ordinary incidence of toxemia is approximately 5 per cent, then the answer is six times.

Dr. Warner: How about the obesity?

Dr. Plass: In relation to what?

Dr. Warner: Toxemia.

Dr. Plass: There is an increased incidence of toxemia in obese women, but I cannot give you the ratio.

BIBLIOGRAPHY

1. Aring, C. D., and Merritt, H. H.: Differential diagnosis between cerebral hemorrhage and cerebral thrombosis; clinical and pathologic study of 245 cases. *Arch. Int. Med.*, lvi:435-456 (September) 1935.
2. Brust, A. A.; Assali, N. S., and Ferris, E. B.: Evaluation of neurogenic and humoral factors in blood pressure maintenance in normal and toxemic pregnancy using tetraethyl ammonium chloride. *J. Clin. Investigation*, xxvii:717-726 (November) 1948.

STATE DEPARTMENT OF HEALTH



SUGGESTED PLAN FOR RABIES CONTROL

The recent appearance of rabies in several Iowa communities indicates that the disease may be on the increase in Iowa. While certain wild animals as the fox and skunk may act as reservoirs of the disease in this state, the disease is usually brought to us and to our farm livestock through the infected dog.

There is as yet no model or standard rabies control plan as there are standards that may be adopted in other divisions of preventive medicine, but there are broad basic principles which, if followed, will control rabies in any area. The following principles of control are endorsed by both the U. S. Public Health Service Regional Office, Kansas City, and the Iowa State Health Department. As they are drawn up they apply more directly to control in towns and cities but with a little modification can be applied to rural areas as well.

1. *Impounding and destruction of all stray and ownerless dogs.* This will require the operation of a local pound or humane shelter where stray dogs may be kept for a few days and, if unclaimed at the end of that period, humanely destroyed. Collection of strays should be carried out by teams of dog wardens and assistants in trucks with proper enclosures.

2. *Annual anti-rabies vaccination of all dogs.* The importance of canine vaccination in a successful control program is now a firmly established fact and needs only a well coordinated educational campaign to bring this fact to the public.

3. *Registration or licensing of all dogs.* It has been found that licensing of all dogs in a community is an important adjunct of a successful control program. If properly enforced, it serves to defray the expenses for the over-all control program, assures a reasonably accurate dog census, rids the area of ownerless strays and places the responsibility of dog control activities squarely on the dog owner.

The foregoing are essentials of a successful control program. The program or ordinance should be administered by the local health depart-

ment and enforced by duly authorized city or county police officials. The ordinance should contain enforcing clauses. It should be well conceived and simply drafted and should contain all important details with regard to its operation. The health officials should strive to launch an effective educational campaign in conjunction with any regulatory measures. This latter point is important to the success of the program.

Some more detailed points which might be considered are:

1. Vaccinated dogs, properly tagged, may be allowed at large 30 days after vaccination. The vaccine is not fully effective until the end of this period.

2. In the face of an outbreak of rabies in the community, a strict quarantine should be placed on *all dogs* which requires that they be kept confined or on a leash when walked out of doors. The permitting of muzzled dogs to run at large during the quarantine period is not recommended, since it defeats the purpose of the quarantine.

3. Dogs under 6 months of age, which are particularly susceptible and not as readily immunized, should be kept confined.

4. Biting dogs and suspected rabid animals should be impounded for an observation period of 14 days. Dogs known to have been exposed to rabies should be destroyed or kept confined under observation for six months.

5. In case of rabies outbreaks in wildlife, such as foxes, adequate trapping programs should be instituted in cooperation with the State Wildlife Conservation authorities.

6. All cases of rabies in man and animals should be reported to the local health officials.

An ordinance which will require vaccination as a prerequisite to licensing, and which combines the two as a single operation, is a sound idea. It will make the dog control program simpler and less cumbersome. The dog owner will appreciate the fact that he has only one trip to make each year when he can have his dog vaccinated and registered at the same time. He should be issued a simple official uniform tag for the dog's collar

and single official uniform certificate of vaccination. The certificate can be made in triplicate, with the original for the dog owner, one copy for the health department's registration files and one copy for the veterinarian. A single fee should be charged which will be low enough to reach all classes of people and high enough to defray expenses of vaccination services and the operation of stray dog control activities.

Needless to say, that no matter how well an ordinance is drafted, it will not have its desired effectiveness unless a well planned educational program goes along with it. Many communities have used such media as newspapers, radio, placards, sound trucks, mimeographed schedules of immunization stations, printed pamphlets, church announcements, talks before civic and school groups and audio-visual aids and found them effective.

INFLUENZA

The Surgeon Generals of the Army, Navy, Air Force and Public Health Service have developed a plan for the establishment of an Influenza Information Center at the National Institutes of Health at Bethesda, Md.* This center will administer in this country the World Health Organization Influenza Program whose aim is the protection of the people of the world from a pandemic of influenza as last experienced in 1918.

The Information Center will collect information as to the occurrence of an outbreak of suspected influenza and aid in the isolation of the virus, as a means of determining the prevailing strains for use in the production of vaccine.

Local health departments and the physicians of the state have a definite part to play in this program, since it is they who first will have knowledge of local outbreaks of suspected influenza.

It is, therefore, requested that you report the occurrence of influenza in your area, using as criteria for diagnosis the "typical" clinical features: sudden onset of fever, muscular aching, prostration and varying degrees of inflammation of the respiratory tract.

*J.A.M.A. Jan. 8, 1949.

TRICHINOSIS

An Old Story With a New Setting

Trichinosis appears periodically in Iowa. Usually cases occur among persons eating home-processed pork sausage, eaten without thorough cooking. Early in January we learned of a number of

cases of the disease which, upon investigation, gave a distinct variation of this usual epidemiologic pattern for trichinosis.

On Dec. 15, 1948, 25 women, all members of a Ladies Aid group in Grundy county, gathered for a regular bi-monthly meeting at which the three members on the refreshment committee served sandwiches, pickles and coffee. Illness among the group first appeared just before the Christmas holidays, with abdominal cramps, diarrhea, nausea, chills and fever. Later there was intense muscle pain, stiffness of the neck, swelling of the cervical nodes and puffiness under the eyes. The onset and severity of illness were in proportion to the number of sandwiches eaten. The three women on the refreshment committee, who sampled the filling as it was mixed, ate the trimmed edges of the sandwiches after they were made and then ate sandwiches at the meeting, became ill first and were among those hospitalized.

Blood examinations during the first 10 days of illness showed total white blood counts ranging from 11,700 to 18,250 with the per cent of eosinophils varying from 15 to 28 per cent. All agglutination tests were negative. Three persons were skin tested for trichinosis during the early part of their illness. One gave a negative test, one was weakly positive and one gave a definite positive reaction.

The filling for the sandwiches was made from 1½ pounds of minced ham, hard-boiled eggs and mayonnaise. The meat, purchased from a local butcher shop, was a portion of a 7 or 8 pound sausage prepared by an Iowa packing concern. The local butcher shop sells at least one of these large sausages daily as they say it is a "cheap type of sandwich meat which sells rapidly." The 1½ pounds of minced ham was ground at the butcher shop, by request of the ladies.

Since no other cases of this disease have appeared in the community which regularly uses much of the same meat product, it appears to all concerned that the raw pork must have been ground previously, and the pork remaining in the grinder was pushed on out ahead of the minced ham and, thus, was incorporated into the sandwich meat.

The grinder used was of the type that is unscrewed, set into the refrigerating compartment when not in use and, thus, not cleaned during the course of the day's selling. It may retain from a quarter to half pound of meat. The manager of the shop says that to insure each purchaser getting the full weight of meat purchased, suet is

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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The A.M.A. National Educational Program: Report of First National Conference

On February 12, the first national conference on the American Medical Association's national educational campaign was held at headquarters in Chicago. The secretary of each state association, together with a chairman from each state, was asked to be present to hear the proposed program presented by Whitaker and Baxter, the public relations' counsel employed by the planning committee to direct the campaign. The official number of such a group would have been about 125 persons, but over 300 were present, showing how much interest exists in the proposed program.

Our report of the conference will necessarily be brief and summarized. First, the 10 point program has been expanded into a 12 point program, which we feel is more "down-to-earth" and practical and one which will have the hearty approval not only of the medical profession but of all persons working for the betterment of public health in this country. The proposals are as follows:

1. *A Federal Department of Health*—creation of a Federal Department of Health, of Cabinet status, with a secretary who is a Doctor of Medicine; and the coordination and integration of all Federal health activities under this department, except for military activities of the medical services of the armed forces.

2. *Medical Research*—promotion of medical research through a National Science Foundation, with grants to private institutions which have fa-

cilities and personnel sufficient to carry on qualified research.

3. *Voluntary Insurance for the Care of the Indigent*—further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas; aid through the states to the indigent and medically indigent by the utilization of voluntary hospital and medical care plans, with local administration and local determination of needs.

4. *Medical Care Authority with Consumer Representation*—establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.

5. *New Facilities*—encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas in which the need can be shown, with local administration and control, as provided by the National Hospital Survey and Construction Act or by suitable private agencies.

6. *Public Health*—establishment of local public health units and services; incorporation in health centers and local public health units of such services as communicable disease control, vital statistics, environmental sanitation, control of venereal diseases, maternal and child hygiene and public health laboratory services; and remuneration of health officials commensurate with their responsibility.

7. *Mental Hygiene*—development of a program of mental hygiene, with aid to mental hygiene clinics in suitable areas.

8. *Health Education*—health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.

9. *Chronic Diseases and the Aged*—provision of facilities for care and rehabilitation of the aged, those with chronic disease and various other groups not covered by existing proposals.

10. *Veterans' Medical Care*—integration of veterans' medical care and hospital facilities with other medical care and hospital programs, with the maintenance of high standards of medical care, including care of the veteran in his own community by a physician of his own choice.

11. *Industrial Medicine*—greater emphasis on the program of industrial medicine, with increased safeguards against industrial hazards and prevention of accidents occurring on the highway, home and farm.

12. *Medical Education and Personnel*—ade-

quate support, with funds free from political control, domination and regulation, of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

Mr. Whitaker explained that the A.M.A. program included mobilizing other organizations into working against a compulsory way of life; high pressure lobbying is definitely *not* in the picture; and an accurate accounting of every dollar will be made, with the accounts open to government inspection at any time. The immediate objective is defeat of the compulsory health insurance program in Congress, but the long term objective is to put a permanent stop to such agitation. This means an all-out campaign to enroll the American people in voluntary insurance systems. The economic shock must be taken out of illness, and the voluntary plans offer the way. Doctors, each and every one of them, should take time to talk to patients about enrolling in a voluntary insurance plan of some sort.

"We're not just working to beat a bill. We're trying to solve a problem. The A.M.A. is going to wage a truthful, hard-hitting campaign in adjective-studded language that the American people can understand. We're going to attack—and attack—until the truth about the vicious consequences of political medicine are known throughout this country. . . . Our greatest need—and this is the most important job you will have—is to get the word to every doctor that this is an emergency, that his help is needed and that his right to continue in private practice may depend on how he measures up to the challenge."

Miss Baxter presented some of the concrete plans for carrying on the campaign. The famous Fildes painting, "The Doctor," which was used on the centennial stamp of American medicine, has been made into a poster about 18 by 20 inches, with a slogan, "Keep Politics Out of This Picture," and a 100 word statement setting forth the essentials of the case against compulsory health insurance. This will be available to every doctor for framing to hang in his office. There will be no broad advertising campaign in the newspapers because of the terrific cost, nor will there be any big radio expenditure at this time. The voluntary insurance plans will be urged to advertise, however, to make known to the public the benefits that are available through them.

Pamphlets will be the main ammunition in the battle. They must be good. A minimum order, which would mean 50 pamphlets for every doctor, is 7,500,000. In the process at this time

are three of these. One is a sparked-up, human interest pamphlet intended for general distribution to patients, workers, lay groups, and all of the public. The second is a question and answer handbook which will serve as information or source material for the doctor. The third is entitled "Calling Every Doctor" and explains the campaign.

It is expected that each state society will call a meeting of the county society secretaries or other officers to explain the program to them and instruct them as to procedure. It is recommended that each county society adopt a strong resolution against compulsory health insurance within the next 60 days and send it to the proper persons in Washington; that debates are a poor medium for dispensing information and should be avoided for the most part; that a press committee be appointed in each county; that the endorsement of other organizations be secured; and that the Woman's Auxiliary be utilized in working with other organizations.

This, in brief, is the report up to the present. It is expected that the president of our society will call a meeting of the executive council and the county society secretaries in the very near future to discuss ways and means for conducting an effective campaign in Iowa.

Cerebral Palsy Clinics

The Iowa Society for Crippled Children and the Disabled has announced a new service, available to all physicians of Iowa, with reference to patients suffering from cerebral palsy. Consultant clinics will be held at the Cerebral Palsy Demonstration School in Des Moines, affording an opportunity for the use of the physical plant of the school to any patient afflicted with this condition.

The clinic will be private in character. No patient will be seen except with a physician's referral, and the child's own physician is requested to attend the clinic. At this time the services of a consultant, who is a member of the American Academy for Cerebral Palsy and the Medical Director of the Demonstration School, will be available. A follow-up report will be made on the diagnosis of each patient. Parent counseling for a home training program will be outlined in the treatment of each child. Thus, the child's own physician will become a partner in the scheduled treatment advised for each patient. By this method physicians of Iowa will save time and energy in that the specialist is brought to them. Thus, patients will not be re-

quired to go to distant centers at considerable expense and with less contact with their own doctors. Fees will be charged on a sliding scale in accord with the family's ability to pay. The physician's confidential advice on the family's financial status will be welcomed and heeded.

The highly trained professional staff at the Demonstration School, with the consultant's supervision, can show the parents what they will be able to do for the child in the home. Very often parents are inclined to wait for vacancies in special schools without realizing they could do much themselves.

Physicians with patients suffering from cerebral palsy are invited to contact the Iowa Society for Crippled Children and Adults, 2917 Grand Ave., Des Moines 12, Iowa, for information regarding such consulting clinic services, which are now available.

1949 Red Cross Fund Campaign

In 1948, more than 300 disasters, such as floods, tornadoes, explosions, fires, hurricanes, and train and plane wrecks, struck in widely separated communities. In each case the particular catastrophe was met with a quick, organized response by the American National Red Cross. If lives are to be saved and the injured and homeless rendered to, a haphazard approach is inadequate. There must be a coordinating agent to tell people *where* help is needed, to turn to *when* help is needed. That is why we have the Red Cross.

But it is not only on such dramatic occasions that the Red Cross renders service. Through its educational program, it daily contributes to public health and accident prevention. Veterans, servicemen and civilians are served by the Red Cross volunteer and paid workers, from entertainment of the hospitalized to aid in personal emergencies.

Last year, in cooperation with the National Foundation for Infantile Paralysis, the Red Cross recruited approximately 1,100 nurses for polio nursing. Approximately 64,000 persons have donated blood in the Red Cross blood program, which has been distributed to

more than 350 hospitals. These are only a few of the many Red Cross services which reach into homes, hospitals, army camps, schools, colleges, industrial plants and business concerns in every community—in *your* community.

Individually we could not do the job of rendering these needed services, but by generously

contributing our money, time and moral support we, particularly as members of the medical profession, show our recognition that the Red Cross is *our* Red Cross, doing *our* job, serving *for* us. March is the month of the Red Cross Fund Campaign of 1949; we hope the campaign will be supported generously by every physician in Iowa.

Acute Leukemia

New and unique compounds have been developed for the treatment of acute leukemia and malignancies. It has been found that the folic acid content of tumor and leukemia cells is greater than normal. Hence, several antagonists to folic acid have been developed which lend themselves to biological assay. Lederle Laboratories has been especially interested in this field.

Teropterin is one of the drugs which has been developed, but Farber has found that this agent is apt to prove deleterious. Another of these drugs, Aminopterin, has proven more beneficial in the treatment of acute leukemia.

It should be emphasized that blood transfusions, the use of heavy metals, Fowler's solution, and other agents are still of value in the treatment of leukemia. Although there is some argument, it is still generally accepted that remissions of the disease are extremely rare, certainly in adults. It is recommended that laboratory findings be checked by bone marrow studies.

That Aminopterin is a toxic drug is apparent by the complications which follow its administration. The most common of these are ulcerative stomatitis, ulcerative ileitis with diarrhea and hemorrhage, aplasia of bone marrow, alopecia and deafness without vertigo. It is the practice of those using the drug to stop its administration with the appearance of severe complications. Following administration of Aminopterin, several changes become apparent. These include immature cells in the blood; the bone marrow approaches normal appearance; the blood and marrow become hypoplastic or aplastic; and megakaryoblasts may appear. Hematopoiesis increases. The size of the spleen, liver, nodes and joints decreases.

In a recent evaluation of 500 cases of acute leukemia, 288 were in children with 123 remissions, and 100 adults with 16 remissions. All of these patients showing remissions remain in the leukemic state, however, though clinically markedly improved. The remaining 212 patients died.

While it is apparent that the use of Aminopterin is still not the answer in the treatment of



acute leukemia and malignancy, at least it has been possible for this agent to prolong life of the patient and to make the terminal phase of the disease less harrowing from a clinical standpoint. It is hoped that continued investigation will lead to further developments in the successful treatment of acute leukemia.

Rheumatic Fever and the School Child

The Committees on School Health and Rheumatic Fever of the American Academy of Pediatrics have issued a joint report, "Rheumatic Fever and the School Child," aimed at the improvement of school medical procedures, especially in the approach to rheumatic fever. This disease is the leading cause of death in children of school age. Since rheumatic fever generally first occurs in children in the first or second grades and recurrences are most common in the high school years, the school is provided with a unique opportunity of discovering and controlling rheumatic fever and rheumatic heart disease.

Toward achieving this end, the report recommends as follows:

"Certain improvements in school health services are needed to make the best use of this opportunity. These recommendations of the Academy will not only be a better approach to rheumatic fever but to other health problems of children. The alertness of teachers and school nurses can bring to medical attention children with signs and symptoms suggestive of rheumatic fever whose condition might otherwise be overlooked. It is also an opportunity through periodic medical examinations to discover unrecognized damage to the heart and to keep under medical supervision known cases of the disease and to make family studies of rheumatic children. It is an opportunity to teach the principles of healthful living to children who have the disease or who are susceptible.

"To aid school health authorities to develop a more rational approach in the control of disease, the Committees on School Health and Rheumatic Fever of the American Academy of Pediatrics recommend: (1) that the school medical examination be improved to aid in more accurate recognition and supervision of rheumatic children, (2) that more emphasis be placed on referral by teachers and nurses of pupils believed to be below-par for medical review, (3) that less emphasis be placed on restricting the physical activity of rheumatic children and more attention given to daily observation of pupils for signs or conditions suggestive of rheumatic disease, (4) that

there be available, to school health services and the practitioners, diagnostic and consultation services to establish diagnosis, (5) that these services be developed in cooperation with, and by utilization of, existing medical and public health resources in the community."*

Close working cooperation between the physician, family, school and other community health and welfare resources is demanded if we are to achieve better health services for school children. The initiative of each physician in promoting and cooperating with such a program in his own community is indicated.

*The Journal of the American Academy of Pediatrics.

AMERICAN BOARD OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

The American Board of Preventive Medicine and Public Health was approved by the Advisory Board for Medical Specialists at their meeting in Chicago, Feb. 6, 1949. This board had been previously incorporated under the laws of Delaware, and headquarters offices established in Baltimore, Md.

The following comprises the membership of the board:

- Walter L. Bierring, M.D., Chairman. State Commissioner of Health, Iowa.
- Felix J. Underwood, M.D., Vice Chairman. Secretary, Mississippi State Department of Health, Jackson.
- Ernest L. Stebbings, M.D., Secretary-Treasurer. Director and Professor of Public Health Administration, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Md.
- Gaylord W. Anderson, M.D., Director, School of Public Health, University of Minnesota, Minneapolis.
- J. H. Baillie, M.D., Executive Director, Canadian Public Health Association, Toronto.
- Floyd C. Beelman, M.D., State Commissioner of Health, Kansas.
- Richard F. Boyd, M.D., United States Public Health Service, Washington, D. C.
- Matthew R. Kinde, M.D., Director of Public Health, W. K. Kellogg Foundation, Battle Creek, Mich.
- Emil E. Palmquist, M.D., Director of Public Health, City of Seattle and King County, Seattle, Wash.
- William P. Shepard, Chairman of Professional Education, American Public Health Association, San Francisco.
- James S. Simmons, M.D., Dean, School of Public Health, Harvard University, Boston.
- V. A. VanVolkenburgh, M.D., Assistant Commissioner, Local Health Services, State Department of Health, New York.

NEWS NOTES

from the

Committee on Medical Service and Public Relations

NATIONAL CONFERENCE ON RURAL HEALTH

The fourth annual meeting of the National Conference on Rural Health was held at the Palmer House in Chicago February 4 and 5, 1949. More than 600 leaders from various health and farm organizations attended, including representatives of child health groups, farm groups, chairmen of state rural health committees, deans of medical schools and officials of the National Health Council and the U. S. Public Health Service.

The meeting was sponsored by the Committee on Rural Health of the American Medical Association, headed by F. S. Crockett, M.D., of Lafayette, Ind. Remarks of welcome were given by Dr. Crockett and George F. Lull, M.D., Chicago, Secretary and General Manager, A.M.A. Dr. Lull stated in his opening remarks that the various national organizations must establish policy and stimulate action at the state, county and community levels. He extended an invitation to representatives of all organizations to visit the offices of the A.M.A. so as to give them a better understanding of the functions of the various departments. In the opinion of Dr. Crockett, the Conference on Rural Health affords the A.M.A. an opportunity to gather and disseminate material and information concerning all fields of rural health, makes all persons concerned more cognizant of the prevailing problems, and through the suggestions and recommendations by representatives of the various organizations the best methods for solving these problems can be formulated.

A panel discussion on the general topic, "Health Programs of the National Farm Organizations," was presented; discussants were as follows: Mrs. J. Laning Taylor, educational director of the National Cooperative Milk Producers Federation, Washington, D. C.; a representative of the Farmers Educational and Cooperative Union of America from North Dakota, in the absence of Mrs. Gladys T. Edwards, Denver, director of education of this organization, who was scheduled to speak but was unable to attend the meeting because of storm conditions; H. E. Slusher, chairman, Medical Care Committee, American Farm Bureau Federation, Jefferson City, Mo.; and Joseph W. Fichter, master, Ohio State Grange, Columbus.

Following the panel, a speech on the subject, "A State Rural Health Committee in Action," was presented by J. S. De Tar, M.D., council member, Committee on Rural Health, Michigan State Medical Society, Milan. "Environmental Hygiene" was the

next topic, discussed by Ernest E. Stebbins, M.D., professor of public health, Johns Hopkins University School of Public Health, Baltimore, Md.

Dr. H. B. Mulholland, of the Committee on Rural Health of the A.M.A., from Charlottesville, Va., continued the discussion with "Animal Diseases Affecting Humans." A film intermission followed. A group of three brief discussions concluded the Friday morning sessions: "Nutrition and the Soil" by Glen W. Bunting, manager, Central Farmers' Fertilizer Company, Chicago; "Health Education and Community Responsibility" by Aubrey Gates, associate director, Cooperative Extension Work, College of Agriculture, University of Arkansas, Little Rock; and "The General Practitioner in Rural Practice" by Ward Darley, Jr., M.D., executive dean, Health Science and Services, University of Colorado School of Medicine, Denver.

Dr. Crockett acted as chairman for the entire morning session. The meeting on Friday afternoon from two to five o'clock was devoted to round-table discussions divided into five sections. The section having the most interest to the Iowa delegation was "The General Practitioner in Rural Practice," under the chairmanship of Dr. Franklin Murphy, Kansas City, Mo. His two discussants were Dr. Lester G. Evans, New York City, and Mrs. Haven Smith, Chappell, Neb. This panel, as indicated by representation, was formed to bring out the point of view of the physician, educator and consumer—Dr. Evans, physician; Dr. Murphy, educator; Mrs. Smith, consumer.

Most of the discussion centered around attracting physicians to the rural areas and keeping them there. All discussants pointed out that the people in a community are partly responsible for holding or losing a physician. Many times persons in the rural communities by-pass the general practitioner to visit a specialist 30 miles away when the general practitioner could have handled the situation, causing the doctor to lose faith in the support of the community and also limiting his income so as to discourage his remaining in the community. One of the discussants mentioned that the community should subsidize a physician to help him get started in these sparsely populated communities. It was made clear that these physicians would not accept charity but would be happy to repay any financial advancement, not meaning actual dollars and cents, but adequate office, laboratory and other equipment to enable the physician to render the excellent medical care he has been

trained to give. The possibility of adding general practice to the education of doctors was also discussed extensively. Many programs were suggested but none was accepted as the solution to the problem. Some of the doctors who attended this section expressed the belief that it was one of the most outstanding meetings of the entire conference.

On Saturday morning, the conference reconvened at 9:30 for summary reports by the round-table committees and a general discussion. At 1:00 p. m. the meeting closed with a luncheon featured by speakers Roscoe L. Sensenich, M.D., South Bend, Ind., President of the A.M.A., and Dr. John O. Christianson, superintendent of the School of Agriculture, University of Minnesota, St. Paul. Dr. W. L. (Buck) Pressly, Due West, S. C., elected "General Practitioner of the Year" for 1949 by the A.M.A., was introduced at the luncheon.

Carl S. Mundy, M.D., Toledo, Ohio, acted as vice-chairman of the entire session.

"During this year's conference," said Mrs. Virginia Shuler, Chicago, Executive Secretary of A.M.A.'s Committee on Rural Health, "leaders in the field of health and medical service have met in round-table discussions with the representative farm organizations to continue the active programs that have been initiated in this country to extend to rural America the best in health and medical care."

The following day, February 6, the twenty-second annual meeting of the National Conference on Medical Service was held at the Palmer House in Chicago, about 230 attending. Many excellent subjects were discussed, such as "Legalized Medical Research," "World Health Organization," "World Medical Association," "United Mine Workers of America Welfare and Retirement Fund," "Streamlining the Council on Medical Service," "What's Happening in Washington?," "Postgraduate Education of the Doctor," "Can Corporations Practice Medicine?" and "The A.M.A.'s Public Educational Program to Date."

R. D. Bernard, M.D., Clarion, was elected secretary of the National Conference on Medical Service to serve during the year 1949. Dr. Bernard has practiced medicine in Iowa 40 years.

Donald L. Taylor

AMERICAN BOARD OF PREVENTIVE MEDICINE AND PUBLIC HEALTH

(Continued from page 124)

The first meeting of the board will be held in Washington, D. C., April 25-26, 1949, to review 315 applications submitted by the Interim Board on Preventive Medicine and Public Health, comprising the Surgeon Generals of the Army, Navy, Air Forces and Public Health Service, as well as considering the Founders Group.

The first examination of the board will be held on May 14-16, 1949, in Washington, D. C.

Full details regarding applications and examinations will be published soon in the leading medical journals.

AMERICAN ACADEMY OF GENERAL PRACTICE

First Annual Meeting

The American Academy of General Practice will hold its first annual Scientific Assembly in Cincinnati at the Netherland Plaza Hotel March 7, 8 and 9. Scientific sessions will be held on all three days, and the program is a broad one, featuring topics of down-to-earth value to the man in general practice. The following doctors will present lectures:

Walter C. Alvarez, Rochester	Karl A. Meyer, Chicago
M. Edward Davis, Chicago	Norman F. Miller, Ann Arbor
Paul A. Davis, Akron	Francis D. Murphy, Milwaukee
John E. Dees, Durham	Franklin D. Murphy,
Charles A. Doan, Columbus	Kansas City
Joseph A. Freiberg, Cincinnati	Walter J. Reich, Chicago
Lowell S. Goin, Los Angeles	Howard A. Rusk, New York
Francis C. Grant, Philadelphia	Tom D. Spies, Birmingham
Tinsley R. Harrison, Dallas	Philip Thorek, Chicago
Robert A. Kehoe, Cincinnati	Herman G. Weiskotten,
John A. Kolmer, Philadelphia	Syracuse

All members of the American Medical Association are invited to attend; for non-members there will be a \$5.00 registration fee.

For reservations, write Subcommittee on Hotels, American Academy of General Practice, 910 Dixie Terminal Building, Cincinnati 2, Ohio.

Application Blanks for Membership

Application blanks for membership in the American Academy of General Practice may be secured from C. V. Hamilton, M.D., 145 East Fourth Street, Garner, Iowa, secretary of the Iowa chapter.

For further information on the Academy of General Practice, see page 127 of this month's JOURNAL.

MORBIDITY REPORT

Disease	Jan. '49	Dec. '48	Jan. '48	Most Cases Reported From:
Diphtheria	4	2	8	Webster, Jasper, Polk
Scarlet Fever	190	151	246	Boone, Polk, Clayton
Typhoid Fever	0	1	0	.....
Smallpox	0	0	0	.....
Measles	57	43	1,157	Cerro Gordo, Wayne, Johnson
Whooping Cough ..	17	28	44	Clinton, Scott
Brucellosis	16	22	30	Scattered
Chickenpox	689	602	429	Black Hawk, Boone, Dubuque, Linn
German Measles ...	10	3	1	Dubuque, Johnson, O'Brien
Influenza	0	0	1	.....
Meningitis	6	6	6	Scattered
Mumps	413	387	361	Black Hawk, Boone, Clinton, Dubuque
Pneumonia	11	8	15	Scattered
Poliomyelitis	9	108	6	Pottawattamie (3), 1 each in Audubon, Franklin, Hamilton, Humboldt, Madison, Webster
Tuberculosis	50	65	72	For the State
Gonorrhea	59	103	109	For the State
Syphilis	179	171	232	For the State

SPEAKERS BUREAU

HERMAN J. SMITH, M.D., Des Moines, *Chairman*

ROBERT N. LARIMER, M.D., Sioux City

HORACE M. KORNS, M.D., Dubuque

JOHN I. MARKER, Davenport

TOM D. THROCKMORTON, Des Moines

DeVOE O. BOVENMYER, Ottumwa

POSTGRADUATE STUDY PROGRAM OF THE AMERICAN ACADEMY OF GENERAL PRACTICE IN IOWA

With Special Reference to Speakers Bureau Postgraduate Courses

The American Academy of General Practice is open to all physicians engaged in general practice, who are members of their local county societies and who show a desire, evidenced by postgraduate and continuation study, to keep abreast of the recent advances in medicine. Original membership is based on general qualifications and recommendations from members of the A.A.G.P. Membership, however, is limited to three years, and renewal is granted on evidence of completion of a satisfactory amount of postgraduate study and attendance at medical and hospital staff meetings.

The requirement is that every member during each three year period must have completed 150 hours of attendance at study courses and medical meetings. At least 50 of these hours must be in attendance at formal postgraduate courses. It is expected that most of these courses will be conducted by teaching institutions. However, provision has been made for approval of certain other courses which are being offered by local and state medical societies.

The postgraduate courses offered in different localities in Iowa under the supervision of the Speakers Bureau of the Iowa State Medical Society have been approved. A copy of the program given in each of these courses will be sent to the American Academy of General Practice, and those who have registered and attended will be certain of receiving credit. This applies to both the one day courses of four to eight hours and to the courses in which two to four hours are given on five to ten different days during the season. The single programs provided for county societies by the Speakers Bureau will be counted only as any other county medical society meeting.

At present programs are being offered in enough localities and are covering enough time that during any three year period an Iowa member of the Academy should be able to get most, if not all, of his postgraduate requirements fulfilled if he attends the courses given in his part of the state by the Iowa State Medical Society. This will be a great advantage in removing the necessity to be away from home for longer periods of time in order to get the required number of hours.

Of the other 100 hours required, there is no definite stipulation. It will depend to some extent on the location of the member and his opportunities to attend certain types of meetings. County, state and national medical meetings of a scientific nature are all accepted. In addition, the scientific meetings of any hospital staff are included. In general, it is intended that about 50 hours shall be attending medical society meetings and 50 hours attending hospital staff meetings. However, since many rural members are not in a location where hospital staff meetings are available, these men will be allowed to substitute other scientific medical meetings.

The postgraduate medical education of the general practitioner is one of the chief objects of the Academy of General Practice. In the future, membership in this organization will assure the public that the physician who belongs is one who is constantly striving to inform himself of medical advances so that he will be able to give to his patients the best possible medical care. It is not contemplated, and probably never will be, to set up a Board of General Practice. To those who have studied this question, it seems that such a move would be unwise if not impossible. The general practitioner is a man who takes care of patients in all fields of medicine, referring where necessary to men who possess special skills in diagnosis and treatment. However, some general practitioners are basically interested in internal medicine, others in surgery, obstetrics or pediatrics. While doing a general practice, a great deal of their work will be along some special line in medicine. To devise a program of examination and certification to adequately determine the ability of the physician would require multiple types of examination, depending on the type of practice in which a physician did most of his work. It is felt that the same goal will be reached if each man chooses the type of course in which he wishes to take his postgraduate study, attending those courses which will benefit him and his patients most.

The Dean of the College of Medicine, State University of Iowa, has shown great interest in the matter of graduate and postgraduate education, especially that which will offer some hospital experience coordinated with lectures. This is a program which will require time to develop, but when available should be of great assistance to the medical profession of Iowa.

Ernest E. Shaw, M.D., Indianola
Iowa Chairman, A.A.G.P.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

BLOOD TRANSFUSION—By Elmer L. DeGowin, M.D., Associate Professor of Internal Medicine, State University of Iowa; and ROBERT C. HARDIN, M.D., Assistant Professor of Internal Medicine, State University of Iowa; and JOHN B. ALSEVER, M.D., Senior Surgeon, U. S. Public Health Service. W. B. Saunders Co., Philadelphia, 1949. Price, \$9.00.

THE BUSINESS SIDE OF MEDICAL PRACTICE—By Theodore Wiprud, Executive Director and Secretary of the Medical Society of the District of Columbia, and Managing Editor of the Medical Annals of the District of Columbia. Second Edition. W. B. Saunders Co., Philadelphia, 1949. Price, \$3.50.

CLINICAL ASPECTS AND TREATMENT OF SURGICAL INFECTIONS—By Frank Lamont Meloney, M.D., F.A.C.S., Associate Professor of Clinical Surgery, College of Physicians and Surgeons, Columbia University; Associate Visiting Surgeon, Presbyterian Hospital, New York City. With a Foreword by ALLEN O. WHIPPLE, M.D. W. B. Saunders Co., Philadelphia, 1949. Price, \$12.00.

CLINICAL CASE-TAKING—By George R. Herrmann, M.D., Ph.D., Professor of Medicine, University of Texas. Fourth Edition. The C. V. Mosby Co., St. Louis, 1949. Price, \$3.50.

ESSENTIALS OF GYNECOLOGIC ENDOCRINOLOGY—By Gardner M. Riley, Ph.D., Assistant Professor of Obstetrics and Gynecology, University of Michigan Medical School. Caduceus Press, Ann Arbor, Mich., 1948. Price, \$3.00.

MAYO CLINIC DIET MANUAL—By the Committee on Dietetics of the Mayo Clinic. W. B. Saunders Co., Philadelphia, 1949. Price, \$4.00.

OBSTETRIC ANALGESIA AND ANESTHESIA; Their Effects upon Labor and the Child—By Franklin F. Snyder, M.D., Associate Professor of Obstetrics and Associate Professor of Anatomy, Harvard Medical School. W. B. Saunders Co., Philadelphia, 1949. Price, \$6.50.

PSYCHODYNAMICS AND THE ALLERGIC PATIENT—By Harold A. Abramson, M.D., F.A.C.A., Associate Physician for Allergy, the Mount Sinai Hospital, New York City; Consulting Physician for Allergy, Sea View Hospital, Staten Island, N. Y.; Assistant Professor of Physiology, Columbia University, New York City. An official publication of the American College of Allergists. The Bruce Publishing Co., St. Paul and Minneapolis, 1948. Price, \$2.50.

1948 YEAR BOOK OF GENERAL SURGERY—Edited by Evarts A. Graham, M.D., Professor of Surgery, Washington University School of Medicine; Surgeon-in-Chief of the Barnes Hospital and the Children's Hospital, St. Louis. The Year Book Publishers, Inc., Chicago, 1949. Price, \$4.50.

1948 YEAR BOOK OF ORTHOPEDICS AND TRAUMATIC SURGERY—Edited by Edward L. Compere, M.D., F.A.C.S., Associate Professor of Surgery, Northwestern University Medical School; Chairman, Departments of Orthopedic Surgery, Wesley Memorial and Children's Memorial Hospitals; Consultant Orthopedic Surgeon, Chicago Memorial Hospital; Consultant in Orthopedics, U. S. Naval Hospital, Great Lakes, Illinois. The Year Book Publishers, Inc., Chicago, 1949. Price, \$5.00.

BOOK REVIEWS

CONGENITAL MALFORMATIONS OF THE HEART

By Helen B. Toussig, M.D., Associate Professor of Pediatrics, Johns Hopkins University School of Medicine; Director of the Children's Cardiac Clinic at the Harriet Lane Home of the Johns Hopkins Hospital. The Commonwealth Fund, New York, 1947. Price, \$10.00.

The subject of congenital heart disease has finally been presented in a complete and lucid form. Dr. Toussig has divided the problem into categories that are consistent with the theoretical as well as the clinical aspects.

The book is divided into four parts. The first covers the subject of embryology, methods of diagnosis and the physiology of cyanosis. The second part discusses malformations which deprive the body of an adequate amount of oxygenated blood. The third part deals with malformations which permit the body to receive an oxygen supply sufficient for body growth, and the last section covers the therapeutic measures available to patients with congenital defects.

It is impossible to overemphasize the ability of Dr. Toussig to clearly present each abnormality in a clear logical manner with valuable summaries at the end of each subject.

This book is a classic and should be in the library

of every physician dealing with congenital heart problems.

G. E. M.

HEART: A PHYSIOLOGIC AND CLINICAL STUDY OF CARDIO-VASCULAR DISEASES

By Aldo A. Luisada, M.D., Instructor in Physiology and Pharmacology, Tufts College Medical School; Lecturer in Medicine, Lecturer, Postgraduate Division, Tufts College Medical School; Associate in Medicine, Beth Israel Hospital, Boston, Mass.; Former Professor of Medicine, Ferrara, Italy. With a foreword by HERRMAN L. BLUMGART, Physician-in-Chief, Beth Israel Hospital; Professor of Medicine, Harvard Medical School. The Williams and Wilkins Company, Baltimore, 1948. Price, \$10.00.

This is one of the most comprehensive texts on heart diseases now available. The author has devoted considerable detail in explaining the technical aids in cardiac diagnosis. The basic concepts of the pathologic physiology are discussed prior to the presentation of the clinical material. The recent cardiac literature has been completely reviewed, and the therapeutic measures brought up to date. There is an excellent chapter on congenital heart diseases.

This volume should appeal to both the cardiolo-

gist and general practitioner. There is also an exceptionally good index which, I believe, will prove a time saver to the busy physician. The author has not overlooked any phase of cardiology. An excellent bibliography is included at the end of each chapter.

G. H. F.

PEDIATRICS AND THE EMOTIONAL NEEDS OF THE CHILD

As discussed by Pediatricians and Psychiatrists at Hershey, Penn., March 6-8, 1947. Edited by HELEN L. WITMER. The Commonwealth Fund, New York, 1948. Price, \$1.50.

This book consists of a selective report of a conference sponsored by the Commonwealth Fund at which a number of pediatricians, psychiatrists and psychiatric social workers explored the problems of the emotional needs of the child. The sessions consisted of the following discussions: (1) What have we learned about emotional growth and development? (2) What can the pediatrician in practice do in the field of mental health? (3) What are pediatric departments now thinking and doing about problems of mental health? (4) What are the next steps in pediatric teaching and training toward better understanding of the emotional life of the child? (5) What are the next steps in furthering comprehensive pediatric service?

The editor of this report comes to the conclusion that pediatricians seem to have become reasonably comfortable in dealing with the physical phases of growth and development, but that they are much less comfortable in dealing with the emotional phases of growth and development. However, the pediatricians have gone far enough in the direction of understanding the emotional phases that they will never be comfortable again until they can deal with total growth and development.

The book appears to be a valuable report on the present-day trends in comprehensive pediatrics and on what further steps must be taken to understand all the aspects of total growth and development.

M. E. A.

PRACTICE OF ALLERGY

By Warren T. Vaughan, M.D., Richmond, Va.; Revised by J. HARVEY BLACK, M.D., Dallas, Texas. Second Edition. The C. V. Mosby Co., St. Louis, 1948. Price, \$15.00.

The second edition of *Practice of Allergy* is a fitting memorial to one who has made his last contribution to the advancement of medical science, for Dr. Vaughan died before his book went to press. He had devoted his entire medical career to the investigation and practice of allergy, and his efforts have contributed in no small degree to our present concept and knowledge of the subject.

While the first edition of *Practice of Allergy*, pub-

lished in 1939, thoroughly covered the fact and theory of that date, there have been important advances since then which have been incorporated in this new text. This work is so nearly a complete summation of our present knowledge of allergy that it deserves a place in the library of every practitioner.

Dr. Black is deserving of great credit for revisions and additions of new material where more recent information made these changes seem necessary.

J. W. Y.

YOUR BABY

The Complete Baby Book for Mothers and Fathers—By Gladys Denny Shultz, Contributing Editor, Ladies' Home Journal; and LEE FORREST HILL, M.D., Former President, American Academy of Pediatrics. Doubleday & Company, Inc., Garden City, N. Y., 1948. Price, \$3.50.

The authors of *Your Baby* have prepared such a comprehensive and simple guide for mothers and fathers that it should be a delight to all—but particularly to the inexperienced. Following a psychologically well prepared section directed to prospective parents, the step-by-step care of the infant is described. Gratifyingly, no knowledge is taken for granted, and such supposedly simple technics as folding of diapers and picking up the baby are well illustrated. The child's growth and mental phases are traced through preschool and early childhood.

Incorporated in the volume are such features as lists of good books for particular age levels, recipes for dishes suitable for young children and a special record section to be filled in by the owner of the book concerning his own child.

This volume serves as an excellent guide for management and understanding of a child's development from conception through childhood. The product of Dr. Hill's and Mrs. Schultz's collaboration, it is an invaluable contribution to the young and wondering parents of America.

V. M. T.

DETAILED ATLAS OF THE HEAD AND NECK

By Raymond C. Truex, M.S., Ph.D., Associate Professor of Anatomy, College of Physicians and Surgeons, Columbia University; and CARL E. KELLNER, Artist, Department of Anatomy, College of Physicians and Surgeons, Columbia University. Oxford University Press, New York, 1948. Price, \$15.00.

This atlas is a beautifully illustrated book of the regional anatomy of the head and neck. It is useful because of the practical regional approach and should be of great assistance to any surgeon operating in this area.

Its clearness makes this atlas a handy reference for any practicing physician.

W. H. M.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. ALLAN G. FELTER, Van Meter

President-elect—MRS. ROGER M. MINKEL, Fort Dodge

Secretary—MRS. CHARLES T. MAXWELL, Sioux City

Treasurer—MRS. M. A. ROYAL, 1138 Thirty-seventh Street, Des Moines 11

LINES FROM THE PRESIDENT

Snow everywhere! In less than two months and a half, however, spring flowers should be budded and we must be ready for the Auxiliary Annual Meeting. In preparation for it, there is much work for all of us.

1. For the sake of accuracy and information for the annual program, I shall appreciate being informed of the following:

(a) changes in county officers that have not been recorded in the news letter, and the names of presidents-elect who will take office before the Annual Meeting.

(b) deaths among doctors' wives in your county or section of the state.

2. Please do not neglect payment of dues by March first; this is necessary in order for counties to have voting delegates at the state meeting and for Iowa to have full representation at National. (If you do not have a copy of the revised bylaws, request one from the Central Office, 505 Bankers Trust Building, Des Moines, Iowa.)

3. Once more I wish to call your attention to the privilege which is ours as doctors' wives, that of being part of a great National Auxiliary. Such an organization does not exist in any other nation in the world. Won't you, who are members-at-large, call the wives in your county together for the purpose of organization? I cannot contact you all personally, but you can write me. Either a Councilor or I will gladly assist you in organization and planning.

4. County presidents, do not fail to consider carefully your annual report; perhaps your auxiliary, collectively and individually, has done more than you think. You should have received your report outline and instructions by this time.

5. To members-at-large who cannot effect an organization in your county, I wish to express my gratitude for your interest. You are carrying on public relations activities alone. Will you please report them to me by April first. You deserve credit, and Iowa needs your activities for a good National report.

6. Plan now to attend the Annual Meeting, April 19 and 20. If you wish to stay at Hotel Savery, early reservations are necessary; the block of reserved rooms is being taken rapidly. Let us make the Annual Meeting *big* in every way.

7. As a last request, allow me to urge every doctor's wife to *take* and *make* opportunities to present the facts about government medicine before lay groups. Review "Uncle Sam—M.D." Latest information regarding socialization activities is alarming; Bill S-5 has already had two Congressional readings.

Mrs. Allan G. Felter

FINANCING THE NATIONAL AUXILIARY

Several inquiries have been received in regard to the increase in National dues and the use of the money. The following letter of explanation from the National Treasurer, Mrs. A. A. Herold, is submitted. It was written in reply to a specific request, but it answers questions in general in these regards.

"At the request of Mrs. Felter, I am writing to you regarding the raise in dues and next year's budget.

"No definite budget based on the increase in dues has been formulated. This is always done just before the preconvention Board Meeting and will be prepared this year in June in Atlantic City. However, our Finance Chairman, Mrs. Scott Applewhite, whose duty is to prepare the budget, has written to all the members of her committee and the President and President-elect asking for suggestions regarding the amount to be budgeted and the contemplated increase in the various allocations. Your Treasurer is, of course, a member of this committee.

"In the December Bulletin, you will find a detailed report of the Auditor covering the period from July 1, 1947 to June 30, 1948. I would suggest that the members of the Auxiliary study this report carefully and also read other data regarding the raise in dues published in their December 1948 Bulletin.

"This year, it was necessary to withdraw \$1,000.00 from our meager savings account in order to continue to function. This was really not enough, but the Board felt it was all we should draw from our savings.

"I could take each allocation and explain how inadequate it is, but it would take much too long so I shall use my office as an example. I am allocated \$150.00 per year. Out of this amount, I must pay for my bond, pay my auditor to audit my books before the convention and at the end of the fiscal year. I must pay for all necessary clerical assistance, office

supplies, postage, telegrams, phone calls, etc. You can easily see how totally inadequate \$150.00 is to take care of an office such as mine.

"Of course all officers, except the President, are now paying their expenses to and from all meetings.

"When the raise in dues was accepted last June by the House of Delegates, the revision read as follows: I quote, 'Each constituent Auxiliary shall transmit to the Treasurer of this Auxiliary, not later than March 15 annually, dues amounting to \$1.00 for each of its members for the current year, which shall include subscription to the periodicals published by this Auxiliary when authorized by the Advisory Council to the Women's Auxiliary.' This means, in other words, that until the A.M.A. has the new periodical ready and receives enough from the advertisements in this periodical to supplement the \$1.00 National dues to finance both this new publication and our Bulletin, we pay \$1.00 dues and another dollar for a year's subscription to the Bulletin. We plan in the very near future to use part of the \$1.00 dues to enable us to mail to every Auxiliary member a copy of all periodicals sponsored by our organization.

"There are many improvements to be made in our Central Office as soon as we have sufficient funds. The details of these have not yet been worked out, but I feel certain they will be during the meeting in Atlantic City next June.

"I hope I have answered your question in part at least. If you wish further information, please do not hesitate to write to me or to either Mrs. Kice or Mrs. Applewhite or to all of us."

Mrs. A. A. Herold, Treasurer

THE TAXPAYER AND NATIONAL HEALTH BILL S-5

The issue of compulsory health insurance has been presented to Congress regularly for several years. Now that President Truman has incorporated this concept in his national program, it would be wise for taxpayers to consider the facts seriously.

Health standards and health service vary considerably throughout the United States. Voluntary prepayment plans have grown by leaps and bounds in all of the states in an effort to provide a solution to the economic burden of medical care. In a recent poll of governors of the 48 states, 8 failed to reply and 40 were not in favor of compulsory insurance.

Those who have studied the health problem intensely, including the majority of doctors of medicine, are agreed that the federal government can best serve the people in the fields of epidemic control, child hygiene, maternity care, laboratory work, immunization, sanitation, diet and improvement of living and working standards.

Compulsory insurance involves government administration of all medical care by means of a tax on payrolls. The present National Health Bill S-5 would require one-half of one per cent to be deducted from payrolls, the expense being born equally by employer and employee beginning July 1. The maximum ex-

pected is three per cent deduction on annual earnings up to \$4,800.

While a three per cent tax does not sound too formidable, it should be understood that such a maximum is only theoretical. Experience in other countries has shown how rapidly and how high such a tax can mount. Statisticians estimate that a few years would bring an increase of six per cent. The paper work involved in such an enormous plan would demand one and one-half million more employees on the government payroll. Experts are of the opinion that four to four and one-half billion dollars would be necessary the first year and the cost would not level off for 50 years; it would eventually reach a maximum of 10 to 12 billion dollars annually. Approximately three years would be required to set the program in motion.

The cost, however, would be of only relative importance if there were adequate assurance that the 140 million people in the United States would be completely covered financially when sickness or accident invaded their lives. What of those individuals whose incomes are lower than \$4,800? What of the tubercular and the mentally ill, who would be excluded from hospital services? We assume that taxpayers would take care of them as they always have, with the addition of compulsory insurance for themselves. What of the veterans, most of whom may now have free medical and hospital care? What of the individuals who preferred to remain private patients of their chosen doctors? Obviously, these groups, too, would pay compulsory health insurance, even though they might not use it.

The 85 million people under Social Security would very likely be the first group to receive benefits. Localities already fairly equipped with doctors, nurses and hospitals would see the first developments. Only partial coverage would be possible indefinitely in sections where medical facilities are limited. In the face of the great need for more doctors, more nurses and more hospitals, the immediate benefits would appear somewhat ambiguous. The building of more hospitals, more medical schools and the provision for 1200 federal scholarships for prospective doctors is excellent long-range planning. We fail to see, however, how compulsory insurance would put more young men in medical school and more nurses in training. As a matter of fact, it has been the voluntary insurance plans which have created a greater need for more doctors and nurses.

Proponents of compulsory insurance insist upon its essentially American character. They ignore the fact that socialism was born in Germany some 75 years ago. They forget, too, that doctors in America have always been in command in the realm of sickness. That is why so many of them found army service disillusioning.

Statistics of every kind have been offered to prove that compulsory health insurance is the answer to all health problems. As a matter of fact, when 40 per cent of the civilian doctors were in uniform in World War II, the civilian death rate on

all age levels continued to decline steadily. In spite of the much abused draft statistics, Americans are the healthiest people in the world. Nearly two-thirds of the disabilities listed for rejected draftees were beyond the power of the medical profession to prevent, regardless of the amount or cost of service available. Approximately 20 per cent might have been influenced by medical care.

A compulsory health plan for city employees failed in San Francisco when the demand for services exceeded the tax. When the director tried to cut down on treatment for minor illnesses, expensive tests and hospitalization, 900 doctors resigned. In other countries compulsory insurance multiplied rather than cut down work-days lost because of sickness. Doctors in Australia boycotted their national plan when presented with a list of 600 medicines approved by the government. They called the list "restrictive," in that it eliminated many commonly used drugs and medicines.

Like voluntary insurance, compulsory insurance will offer no compensation for the first day or so of illness. Patients may choose their own doctors, but doctors and hospitals have the right to *accept* or *reject* patients. Doctors may choose their own method of payment: a fee for each service rendered, a *per capita* payment per patient or an outright salary.

Compulsory insurance would not solve the problem of faulty distribution of medical care. An estimate of the number of doctors in a county is not an accurate gauge, for many people near cities use their facilities. Living and office quarters, hospitals or even temporary subsidies seem the best inducement to young doctors in areas where they are badly needed.

In the meantime, it is well to keep in mind that "It is not possible to socialize the means of paying for medical care without simultaneously socializing the quality and quantity of the product of medical care."

Mrs. K. M. Chapler
Chairman Publication
Woman's Auxiliary to the Iowa State
Medical Society

At the suggestion of our president, Mrs. Felter, we have prepared the above analysis of National Health Bill S-5 with the thought that it might be reprinted through the influences of doctors' wives in as many local papers as possible throughout the state. Most doctors and their wives are quite well informed on this topic, but too little information from the professional viewpoint has been presented to the layman.

Affirmative resolutions of legislation by large organizations are often cleverly engineered by shrewd leaders. Fifty large national organizations are said to be backing the Health Bill. It is a safe guess that the majority of the membership in most of these groups does not comprehend the implications of the bill. However, since newspapers are a common medium, auxiliary members might be able to serve the profession and the layman in this small way.

CONGRESSIONAL NOTES ON MEDICINE

Arkansas Resolve

The Arkansas State Legislature on January 21, without a dissenting vote, passed a resolution asking Congress to refrain from enacting socialized medicine. Arkansas is the second state to petition Congress on this subject. The Nebraska Legislature's action was reported in last week's Bulletin. Which state will be next to petition?

Medical Bills in Congress

Some of the more important medical and health bills introduced on the first day of the Eighty-first Congress are listed by title.

S. 5. National Health Insurance. By Mr. Murray, of Montana, Mr. Wagner, Mr. Pepper, Mr. Chavez, Mr. Taylor and Mr. McGrath. Provides a national health insurance and public health program. Referred to the Committee on Labor and Public Welfare.

S. 132. Local Public Health Units. By Mr. Chapman, of Kentucky. Assists the states in the development and maintenance of local health units and for other purposes. Referred to the Committee on Labor and Public Welfare.

S. R. 16. Hospitalization for Federal Employees. By Mr. Langer, of North Dakota, January 5. Authorizes the Committee on Post Office and Civil Service, or any duly authorized subcommittee thereof, to conduct a full and complete study and investigation with respect to all matters relating to the desirability and feasibility of instituting a hospitalization program for the benefit of civilian employees of the Government of the United States, such program to include provision for prepayment of hospitalization and surgical costs in hospitals to be designated by such employees to be attended by physicians and surgeons also of their choice. Referred to the Committee on Post Office and Civil Service.

H. R. 335. Old-Age Assistance. By Mr. Boggs, of Louisiana, January 3. Amends the Social Security Act, as amended, so as to increase the amounts of Federal contributions to the states for old-age assistance, aid to dependent children and aid to the blind. Referred to the Committee on Ways and Means.

H. R. 345. National Health Insurance. By Mr. Celler, of New York, January 3. Provides a national health-insurance and public-health program. Referred to the Committee on Ways and Means.

H. R. 1512. Chiropractors in V. A. By Mr. Huber, of Ohio, January 17 (by request). Authorizes the appointment of doctors of chiropractic in the Department of Medicine and Surgery of the Veterans' Administration. Referred to the Committee on Veterans' Affairs.

The Health Insurance Bills S. 5 and H. R. 783 are identical with S. 1320, the Wagner, Murray, Dingel bill of the Eightieth Congress.

Jos. S. Lawrence, M.D.
Director, Washington Office, A.M.A.
Bulletin No. 3

ACTIVITIES OF COUNTY AUXILIARIES

Sioux County

The Sioux County Auxiliary met for their annual Christmas luncheon in the Martin Hotel on December 8, with the president, Mrs. J. D. Luttom, presiding. The Auxiliary members were pleased to hear that the outlet sale of merchandise made by the handicapped had netted about \$200. A free contribution was taken up for the Goodfellow fund. Mrs. William Keller entertained the group with a reading entitled "Good News," after which carols were sung under the leadership of Mrs. J. W. Graham.

Mrs. W. R. Blume, Secretary

Delaware County

The Delaware County Auxiliary met at the Glen Charles Hotel for its regular monthly meeting. The report on the *Hygeia* survey was carried over until the next meeting. Election of officers was held, after which a dinner was enjoyed with the husbands.

Mrs. B. H. Byers

Polk County

Fifty members attended the annual meeting of the Polk County Auxiliary. Following luncheon, officers for the coming year were elected: Mrs. Harold J. McCoy, president; Mrs. C. L. Putnam, president-elect; Mrs. Howard Smead, vice president; Mrs. A. H. Downing, secretary; Mrs. Dwight Wirtz, treasurer.

Projects agreed upon were: preparation for the state Annual Meeting, nurse recruitment and outlet sale of merchandise made by the handicapped. The following committee chairmen were appointed: Mrs. Howard Smead, program; Mrs. C. L. Putnam, state Annual Meeting; Mrs. L. K. Shepard, public relations; Mrs. F. Eberle Thornton, work for the handicapped; Mrs. George Marquis and Mrs. James W. Young, hospitality; Mrs. C. C. Jones, legislation; Mrs. William B. Chase, Jr., publicity; Mrs. Henry Decker, auditing; Mrs. Floyd Rice, *Hygeia*; Mrs. R. R. Simmons, historian; Mrs. E. J. Harnagel, nominating; Mrs. Floyd Burgeson and Mrs. Charles Latchem, telephone.

Mrs. H. J. McCoy

Henry County

The Henry County Auxiliary has held monthly dinner meetings with the doctors. Work on the nursing survey was completed, and plans for the promotion of *Hygeia* were presented and worked on. The following officers were elected at the December meeting: Mrs. J. S. Jackson, president; Mrs. J. G. Widmer, vice president; Mrs. Kenneth Beebe, secretary-treasurer.

Mrs. J. S. Jackson

Montgomery County

The Montgomery County Auxiliary meets once a month with the Medical Society for dinner. At the December meeting, the following officers were elected: Mrs. H. Borroe, president; Mrs. Ed Crox-

dale, vice president; and Mrs. E. M. Sorensen, secretary. Mrs. Fred Hansen presented "Uncle Sam—M.D." for discussion at a meeting of the Congregational Church Guild. Members of the Auxiliary spend one afternoon each month mending and sewing at the hospital in Red Oak.

Mrs. E. M. Sorensen

Dallas-Guthrie Counties

Following luncheon with the doctors and the Rotary Club, the Dallas-Guthrie Auxiliary held its annual meeting in Dr. Fail's office in Adel, January 27. In spite of bad weather, eight members were present. Mrs. A. G. Felter, state president and long-time member of the Dallas-Guthrie Auxiliary, was the guest of honor.

Mrs. C. R. Osborn, retiring president, presided at the business meeting. Mrs. D. W. Todd reported 46 one-year and 1 three-year subscriptions to *Hygeia*. In compliance with the new state bylaws, the Auxiliary voted to raise its dues from \$1.00 to \$3.00. Nurse recruitment was urged. The social committee reported three picnics and two parties had been enjoyed during the past year.

The following officers were elected: Mrs. D. W. Todd, president; Mrs. William Seidler, Jr., president-elect; Mrs. C. A. Nicoll, first vice president; Mrs. P. W. Beckman, second vice president; Mrs. C. E. Porter, secretary; Mrs. W. V. Thornburg, treasurer.

Following the business meeting, Mrs. E. T. Warren presented a book review of Dr. W. W. Bauer's *Stop Annoying Your Children*.

Pottawattamie County

Forty members of the Pottawattamie County Auxiliary met for dinner in the Hotel Chieftain Terrace Room, Council Bluffs, on January 18. Mrs. I. Sternhill, president, presided at the meeting. Mrs. J. P. Cogley, program chairman, introduced Mrs. Allan G. Felter, President of the Woman's Auxiliary to the Iowa State Medical Society, who addressed the group on National Health Bill S-5. An informal period of questions and discussion amplified Mrs. Felter's excellent explanations of the main features of the bill.

Special invited guests included Mesdames Wayne Burgeson, president of the City Council of Parents and Teachers; Harry Voss, Frank Tedesco and Harold Talbot, presidents of the three P.T.A. units; Mrs. Gertrude Delahant, school nurse; Miss Margaret Tinley of *The Nonpareil*; Mrs. Eric Hansen, Mrs. W. B. Negethon and Mrs. William Ouren.

THE NATIONAL MEETING

Haddon Hall will be the headquarters for the Annual Meeting of the Woman's Auxiliary to the A.M.A., which will be held in Atlantic City, N. J., June 6 to 10, 1949.

Requests for reservations should be sent at once to Dr. Robert A. Bradley, Chairman, Subcommittee on Hotels, 16 Central Pier, Atlantic City, N. J.

ON BORROWING REFERENCE MATERIAL

Mrs. Cecil C. Jones, 3303 Lincoln Place Drive, Des Moines, requests that all reference material having to do with medicine, which is borrowed from her as Legislative Chairman, be returned within a period of two weeks. The material is limited, and, in order to broaden its distribution, each doctor's wife is asked to return it as soon as possible. If personal copies are desired, Mrs. Jones can give addresses so that individuals may secure their own.

IT CAN BE DONE

Mrs. E. T. Warren, Stuart, and Mrs. C. E. Porter, Redfield, members of the Dallas-Guthrie Auxiliary, are both members of their local library boards. Each of them reports being instrumental in placing Dr. W. W. Bauer's *Stop Annoying Your Children* in their respective libraries. Mrs. Warren says there is a waiting list of readers for the book in Stuart.

HAVE YOU READ?

That unexcelled pamphlet, "Uncle Sam . . . M.D.," which was prepared by the Michigan Public Expenditure Survey? No doctor's wife should fail to do so.

"State of the Union's Health" in the January 1949 issue of *Hygeia*? This is a statement on the Brookings Health Report and should not be ignored.

CORRECTION

To the list of National Health agencies, given in the February JOURNAL on the Woman's Auxiliary page, add the American Hospital Association, 18 East Division St., Chicago 10, Ill.

STATE DEPARTMENT OF HEALTH

(Continued from page 118)

run through the grinder to force the last of the meat through. This is not necessarily done when the shop grinds meat to be placed in its display cases.

As a precaution against anything similar happening in the future, the shop is adopting the policy of refusing to grind any meat that is to be eaten without being cooked.

NEW APPOINTMENT IN THE VENEREAL DISEASE DIVISION

Mr. Richard Hibbets of Easton, Pa., has been appointed administrative assistant to Dr. Ralph H. Heeren of the Division of Venereal Disease Control. Mr. Hibbets received his Bachelor of Science degree from Purdue University and, after four years in the armed forces, received specialized training in venereal disease control from the U. S. Public Health Service. He has been associated with the Georgia and Mississippi State Departments of Health. Mr. Hibbets assumed his new duties on February 10.

BLUE CROSS-BLUE SHIELD FIRST INDIVIDUAL ENROLLMENT

Marshall county is the first county in which individual enrollment is to be offered by Blue Cross and Blue Shield. According to proclamation by the mayor of the city of Marshalltown, the week of March 7 to 12 is to be designated as Blue Cross-Blue Shield week. During this week, enrollment will be accepted from individuals, self-employed or working with groups of less than six. New groups of six or more employees are to be enrolled, and additions made to the 102 existing groups enrolled in Marshall county. The County Health Improvement Association started enrollment on February 21 but will add special emphasis to their campaign during the week of March 7 to 12.

Blue Cross-Blue Shield week has the cooperation of the entire community, and an effective organization is being set up, which includes the hospitals, the medical profession, the civic organizations, etc. Volunteer workers will man the booths for the enrollment. The banks will cooperate by permitting depositors to authorize payment for their Blue Cross-Blue Shield from their accounts.

Publicity will be given to the campaign by means of news releases, radio talks, interviews and advertising. Talks will be given before the civic clubs. The Marshalltown Advisory Council will be guests at a luncheon sponsored by the doctors and the Evangelical Deaconess and St. Thomas Mercy, Blue Cross member hospitals. Thirty-five of the 40 doctors in Marshall county are participants in Blue Shield and are giving their support to the individual enrollment.

Mrs. Anne L. Lachner, director of Public Relations of Blue Cross, is in charge of this first Blue Cross-Blue Shield individual enrollment. She will be assisted by Mrs. R. A. Bennett, Robert Beck and David Patterson of the Blue Cross field staff.

A report on the results of this enrollment will be given in a later issue of the JOURNAL.

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Tuesday at 11:30 a.m.

WOI—Thursday at 11:15 a.m.

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| March | 1- 3 | Red Cross Drive
Mr. E. N. McIlrath, American Red Cross, Des Moines |
| March | 8-10 | Immunizations
Albert D. Blenderman, M.D., Paullina |
| March | 15-17 | Weight Control
Aubrey V. Gould, Jr., M.D., Wilton Junction |
| March | 22-24 | Acne
Evan A. Peterson, M.D., Burlington |
| March | 29-31 | Plastic Surgery
Walter A. Kirch, M.D., Des Moines |

WOMAN'S AUXILIARY

to the

Iowa State Medical Society

Organized May 9, 1929, Des Moines, Iowa

TWENTIETH ANNUAL MEETING

Hotel Savery, Des Moines

PROGRAM

Tuesday, April 19

9:00 a. m.

Registration—

Executive Board Meeting—for board members, county presidents, presidents-elect and past presidents of the State Auxiliary

11:45 a. m.

Address: "The Forces Behind the Drive for Socialized Medicine and Education," Arthur L. Conrad, Associate Administrator, National Physicians Committee for the Extension of Medical Care

12:30 p. m.

Executive Board Luncheon—

2:00 p. m.

Round Table instruction, directed by Mrs. Luther Kice, National president

4:00 p. m.

Tea in honor of guests and county presidents at Des Moines Art Center, Greenwood Park, Grand Avenue and Polk Boulevard

8:00 p. m.

Informal bridge party, Hotel Savery

Wednesday, April 20

9:00 a. m.

Mrs. Allan G. Felter, President, presiding.

General meeting—

Invocation—Reverend August Samuelson, Chaplain, Iowa Lutheran Hospital

Welcome—Mrs. Harold J. McCoy, President, Woman's Auxiliary to the Polk County Medical Society

Response—Mrs. Roger M. Minkel, President-elect, Woman's Auxiliary to Iowa State Medical Society

Presentation of guests—

Minutes of last annual meeting—

Announcement of committees—

In Memoriam—Mrs. Soren S. Westly, past president

Report of the President—

Reports of State Officers and committee chairmen—

Roll call of counties—Reports of Presidents

Address: "The Auxiliary in Public Relations," Dr. Louis A. Buie, Mayo Clinic, Rochester, Minn.

12:00 noon

Annual Meeting Luncheon

Guests of Honor—Mrs. Luther H. Kice, President, Woman's Auxiliary to American Medical Association; Dr. Louis A. Buie, Mayo Clinic, Rochester, Minn.; Dr. James E. Reeder, President, Iowa State Medical Society; Dr. Nathaniel G. Alcock, President-elect, Iowa State Medical Society

Greeting—Dr. James E. Reeder

Greeting—Dr. Nathaniel G. Alcock

Address: "Auxiliary Goals," Mrs. Luther J. Kice

Report of Nominating Committee—

Election of Officers—

Plans for the Coming Year—Mrs. Roger M. Minkel, President 1949-1950

Recommended Budget 1949-1950—

Report of Registration Committee—

Report of Resolutions Committee—

Installation of Officers—

Election of Delegates to National Meeting at Atlantic City—

Minutes of the Meeting—

Adjournment—

3:30 p. m.

Postconvention Board Meeting—

7:30 p. m.

Iowa State Medical Society Banquet and Dance
Hotel Fort Des Moines

SOCIETY PROCEEDINGS

MEETINGS

Black Hawk County

The Black Hawk County Medical Society met January 18 at the Elks Club, Waterloo. Dr. Lee F. Hill, Des Moines, spoke on "Disturbances in Longitudinal Growth of Children."

At the February meeting, held the fifteenth at the Elks Club, Waterloo, the speaker was Dr. William B. Bean, Professor of Medicine, State University of Iowa. His subject was "Certain Clinical Manifestations Common to Chronic Disease of the Liver in Normal Pregnancy."

Dallas-Guthrie Counties

The Dallas-Guthrie Medical Society held its regular meeting at Adel on January 27, meeting with the Rotarians for a noon dinner. Dr. Charles A. Nicoll, Panora, addressed the Rotarians on the subject of "Compulsory Health Insurance." Dr. Frank A. Wilke, Perry, spoke on "Carcinoma of the Stomach."

Delaware County

Members of the Delaware County Medical Society and its Auxiliary held a dinner meeting at the Glen Charles Hotel in Manchester on December 19.

Iowa and Illinois Central District Medical Association

The quarterly (spring) meeting of the Iowa and Illinois Central District Medical Association will be held Wednesday, March 16, in the Fort Armstrong Hotel, Rock Island, Ill. Following a 6:30 p.m. dinner, Dr. Robert V. Daut, Davenport, will speak on "Cancer of the Prostate: Aids in Diagnosis and Advances in Treatment." Dr. Clarence Dennis, Professor, Department of Surgery, University of Minnesota, Minneapolis, will be the guest speaker, addressing the group on "Surgical Treatment of Ulcerative Colitis."

Jackson County

Dr. John J. Tilton, Bellevue, was elected president of the Jackson County Medical Society at a meeting held January 24 in Maquoketa. Other officers elected were Dr. Earl V. Andrew, vice president, and Dr. J. E. Swegart, secretary-treasurer.

Johnson County

An open discussion on "Social Aspects of Medical Practice" was the program at the regular dinner meeting of the Johnson County Medical Society, held February 2 at the Hotel Jefferson in Iowa City. Prof. H. W. Saunders, Chairman of the Department

of Sociology at the State University of Iowa, was the leading speaker in the discussion.

Linn County

Guest speaker at the next monthly meeting of the Linn County Medical Society, to be held in Cedar Rapids March 10, will be Dr. Walter Freeman, Washington, D. C. His subject will be "The Neurological Treatment of Suffering."

Marshall County

Dr. Charles W. Gray, Oakdale, spoke to members of the Marshall County Medical Society at a dinner meeting in Marshalltown February 1 on the topic of "Treatment of Tuberculosis with Streptomycin."

Page County

The Page County Medical Society met January 20 at the American Legion County Club in Shenandoah. Two Omaha doctors, Eugene Simons, M.D. and Robert Long, M.D., addressed the group on "Rheumatism and Arthritis."

Polk County

At the annual meeting of the Polk County Medical Society, January 19, Dr. Fred Sternagel took office as president and Dr. Lee F. Hill was named president-elect to take office in 1950. Elected secretary-treasurer was Dr. Byron M. Merkel. Delegates and alternates named were Drs. Maurice T. Bates, Francis C. Coleman, Herman J. Smith, James A. Downing, Van C. Robinson, Martin I. Olsen, Robert J. Porter, Robert L. Parker, Clifford W. Losh, Sr., Alonzo L. Jenks, Jr., Abraham G. Fleischman and Harry A. Collins. Guest speaker for the dinner meeting, held at the Des Moines Club, was Tom Collins, Kansas City, Mo.

Pottawattamie County

At a meeting of the Pottawattamie County Medical Society, held January 18 at Hotel Chieftain, Council Bluffs, "Current Medical Economic Problems" was the subject discussed by speakers Dr. James E. Reeder, President of the Iowa State Medical Society, and Dr. Joseph McCarthy, Omaha, President-elect of the Nebraska State Medical Society.

Wapello County

Programs of the monthly dinner meetings of the Wapello County Medical Society, held at St. Joseph Hospital in Ottumwa, were as follows: on December 7, Drs. Glenn C. Blome, Edward B. Hoeven and Elias B. Howell presented a demonstration on "Some End Results in Hip Fractures"; on January 4, Dr. Nathan

A. Womack, University of Iowa, talked on "The Rationale of the Treatment of Acute Cholecystitis"; on February 1, Dr. Sloan Wilson, University of Kansas, spoke on the subject, "Some New Therapeutic Agents for Leukemias and other Hematopoietic Diseases"; on March 1, Dr. Siegmund F. Singer discussed "Care and Treatment of Advanced Cancer Patients."

Woodbury County

Dr. Mark C. Wheelock, Associate Professor of Pathology at Northwestern University, Chicago, and former Sioux City physician, addressed the Woodbury County Medical Society February 10 on the subject of "Morphologic Diagnosis of Cancer." The dinner meeting was held in the ballroom of the Mayfair Hotel, Sioux City.

PERSONALS

Dr. Nathaniel G. Alcock has returned from Pasadena, Calif., following a three week absence during which Dr. Alcock attended various medical meetings

Dr. Carroll O. Adams of the Park Hospital Clinic, Mason City, was the discussant giving the view of the medical profession on socialized medicine on the KGLO Forum Hour, January 17, which was sponsored by the health and safety committee of the Mason City business and Professional Women's Club.

Dr. John H. Ahrens of Iowa City has become associated with Dr. Merle J. McGrane in New Hampton, moving there the middle of January. A graduate of the Washington University School of Medicine, St. Louis, Dr. Ahrens interned at the Barnes and City Hospitals in St. Louis. After completing surgical training at the State University of Iowa College of Medicine, he remained there until the present move.

Dr. George A. Bairnson, Cedar Falls, discussed socialized medicine at the Forum of the Congregational Church on February 13.

Dr. Worthey C. Boden of Knoxville has taken over the eye, ear, nose and throat practice of Dr. LeRoy R. Tripp, Sioux City, who is retiring because of ill health. Dr. Boden will open in his new location February 1.

Dr. Willis E. Brown, Associate Professor of Obstetrics and Gynecology at the State University of Iowa College of Medicine, at a meeting February 10 of the South Atlantic Association of Obstetricians and Gynecologists in Williamsburg, Va., presented a paper, "Absorption of Radiopaque Substance Used in Hysterosalpingography," which recently won the Foundation Prize award.

Dr. Roderick B. Chisholm recently announced his retirement, after practicing medicine for 42 years in Griswold.

Dr. Elliott A. Cobb of Iowa City has announced the opening of offices for the practice of orthopedic surgery and fractures in Cedar Rapids.

Dr. Robert M. Collison, Oskaloosa, spoke before the Rotary Club January 18 with an address on hospitals illustrated by a movie film.

Dr. Robert Hardwig, who recently completed his residency at the City Hospital, Cleveland, Ohio, has returned to Waverly to join the staff of the Rohlf Memorial Clinic for the practice of internal medicine.

Dr. Robert B. Isham, native of Webster City, has become associated with Dr. Sam Savre of Osage. Dr. Isham was graduated from the State University of Iowa College of Medicine in 1944 and interned at St. Vincent's and Providence Hospitals in Portland, Ore. After serving 18 months with U. S. Naval Medical Corps, Dr. Isham has been with the Crossett Hospital Clinic, Crossett, Ark., for the past two years, heading the department of obstetrics, gynecology and pediatrics for the past 10 months.

Dr. C. Dudley Miller of Denison left late in January for the U. S. Marine Hospital at Norfolk, Va. After surgical training at Norfolk, Dr. Miller will begin a three year residency in urology at the U. S. Marine Hospital at Staten Island, N. Y. Dr. Richard M. Johnson, who has been associated with Dr. Miller since late in 1948, will assume Dr. Miller's practice.

Dr. Stanley T. Moen has become associated in Cedar Rapids with Drs. Arthur W. Erskine, James V. Prouty, and Wayne K. Cooper in the practice of radiology.

Dr. H. H. Perman has taken over the practice and medical and surgical clinic of Dr. Ivan E. Brown, who plans to take special training in the field of surgery. Dr. Perman has been associated with Dr. Brown at the clinic for the past year.

Dr. Frank R. Peterson, of Cedar Rapids, was the guest speaker at the annual meeting of the Van Buren County chapter of the American Cancer Society, which was held in Keosauqua January 27.

Dr. Paul C. Richmond of New Hampton talked on socialized medicine to the Rotary Club on January 27.

Dr. Charles Ryan, a native of Sioux City, has joined the Cogley Clinic in Council Bluffs as a member of the department of internal medicine. A 1941 graduate of the State University of Iowa College of Medicine, Dr. Ryan recently completed postgraduate work at Harvard Medical School.

Dr. Cecil W. Seibert of Waterloo addressed the Tuesday Study Club January 25 on the subject of cancer.

Dr. Rodger B. Smith, coming to Mason City from Appleton, Wisc., where he was in private practice for the past year and a half, February 1 joined the Park Hospital Clinic as ear, nose and throat specialist. A graduate of Rush Medical College, Chicago, Dr. Smith interned at the Harper Hospital, Detroit, and took postgraduate work at Washington University School of Medicine, St. Louis. Before moving to Appleton, Dr. Smith served as resident physician at University Hospital, Cleveland, for two years and was with the Davis and Neff Clinic, Madison, Wisc., for five years.

Dr. Lincoln F. Steffens, of Dubuque, who served in the U. S. Army Medical Corps for five years, spoke on January 23 at a meeting of the two-hundred and twenty-fifth air forces composite squadron reserve on the effect of flight on the human body.

Dr. James M. Tierney, formerly of Perry, has joined the staff of the Carroll Medical Center to practice internal medicine. Dr. Tierney was graduated from Creighton University School of Medicine, Omaha, in 1943 and interned at St. Joseph's and Great Lakes Naval Hospitals. Following three years' service with the U. S. Navy Medical Corps, Dr. Tierney was resident physician in internal medicine at St. Joseph's Hospital in Baltimore, Md., and for 18 months has been on the residency staff of the Veterans Hospital, Des Moines.

Dr. Tom D. Throckmorton of Des Moines spoke on socialized medicine at a meeting of the Adel Chamber of Commerce on February 4.

DEATHS

Butts, John H., 54, of Waterloo, died January 21 at University Hospitals, Iowa City, from the effects of an anti-rabies vaccine. Born in Montezuma, Dr. Butts was graduated from the State University of Iowa College of Medicine in 1919. After completing his internship in Iowa City, Dr. Butts began practicing medicine in Waterloo. He was a member of the Black Hawk County and Iowa State Medical Societies.

Howland, Charles F., 69, Des Moines, died January 22 at Iowa Lutheran Hospital following an illness of two months. Born in Albany, N. Y., Dr. Howland moved to Rolfe as a child. After his graduation from Northwestern University Medical School in 1903, Dr. Howland practiced in Tama and Montezuma. He practiced in Des Moines from 1910 until his retirement about a year and a half ago. He was a member of the Polk County and Iowa State Medical Societies.

Kingsbury, Earl LaVerne, 45, of Keokuk, died suddenly in St. Joseph Hospital January 22 following a heart attack. Born in Mystic, he came to Keokuk with his parents in 1913 and was graduated from the State University of Iowa College of Medicine in 1932. Dr. Kingsbury served his internship at Gary, Ind., and practiced medicine in Nauvoo, Ill., for five years, returning to Keokuk in 1938. He was a member of the Lee County and Iowa State Medical Societies.

Kriechbaum, Walter P., 59, Burlington physician, died January 22 in a Jacksonville, Ill., hospital after an extended illness. Dr. Kriechbaum was graduated from Northwestern University Medical School in 1914 and served his internship at Mercy Hospital, Chicago. He practiced medicine in Burlington from 1915 until ill health forced his retirement. He was formerly a member of the Des Moines County and Iowa State Medical Societies.

McCreery, John W., 71, of Whittemore, died at his home February 2 following a sudden heart attack. He was graduated from Drake University College of Medicine in 1898 and, after practicing at Pioneer for two years, moved to Whittemore. He was a life member of the Kossuth County and Iowa State Medical Societies.

Moes, Mathias J., 67, of Dubuque, died January 31 at Maquoketa Hospital after an accident in which the automobile he was driving collided with a bus on an icy highway. Dr. Moes was born at Rockdale and was graduated in 1906 from Northwestern University Medical School, beginning the practice of medicine in Dubuque in 1908. He was a member of the Dubuque County and Iowa State Medical Societies.

Steelsmith, Frank R., 74, of Des Moines, died February 5 at his home in Des Moines after a lengthy illness. A native of Conrad, Dr. Steelsmith was graduated from Drake University College of Medicine in 1901. He was a member of the Polk County and Iowa State Medical Societies.

AMERICAN COLLEGE OF ALLERGISTS

Members and nonmembers of the American College of Allergists are invited to attend the Annual Meeting in Chicago at the Palmer House from 2 p. m. Thursday, April 14, to 5:30 p. m. Sunday, April 17.

There will be over 20 scientific exhibits and 40 technical exhibits of interest to allergists. Some 50 scientific papers will be presented, ranging from the most practical application of diagnosis and therapy in allergic diseases to the investigative fields of great importance. On Sunday there will be a Panel Discussion on Pediatric Allergy, which will be recorded and published in book form.

Make hotel reservations directly with the Reservation Manager, Palmer House, Chicago 90, Ill., including arrival and departure time, type and rate room desired, and indicating you are attending this meeting.

The JOURNAL *of the* Iowa State Medical Society

Vol. XXXIX

Des Moines, Iowa, April, 1949

No. 4

Members of the Iowa State Medical Society:

It is again time for the annual College of Medicine issue of the Journal of the Iowa State Medical Society. Each year since 1943 the editor of the Journal has invited the College to supply the scientific portion of this issue. As a newcomer to the College of Medicine, I greatly appreciate this courtesy. It gives an excellent opportunity for members of the College to present the scientific endeavors of their respective departments and to review subjects of general medical interest to each of you. I have been impressed with the excellent spirit of cooperation existing between the physicians of the state and the faculty of the College of Medicine, of which this yearly invitation to aid in the building of an issue of the Journal is another expression.

In these times of political and economic change, it seems particularly important that this spirit of cooperation between all elements of medical practice reach a maximum efficiency, in action as well as in theory, so that through unified effort we can supply the optimum amount and quality of medical service to our common objective, the individual patient. This cooperative endeavor is of added importance to us as members of the College of Medicine, because it is with your help and stimulation that we are guided in the training of physicians to meet the needs and problems of these unusual times.

Brief notes have been included in this issue concerning Dr. Clarence E. Van Epps and Dr. Arthur Steindler. Although you know better than I their records and the influence they have had upon the development of the College of Medicine, I have found it easy to see the mark of their influence here in Iowa City, the fine regard held for them by their colleagues and the love of the students who through the years have grown and matured under their tutelage.

In addition to extending greetings from the faculty of the College of Medicine, I add my own and my appreciation for the warm welcome I have received from each of you.

Mayo H. Soley, M.D.
Dean, College of Medicine
State University of Iowa



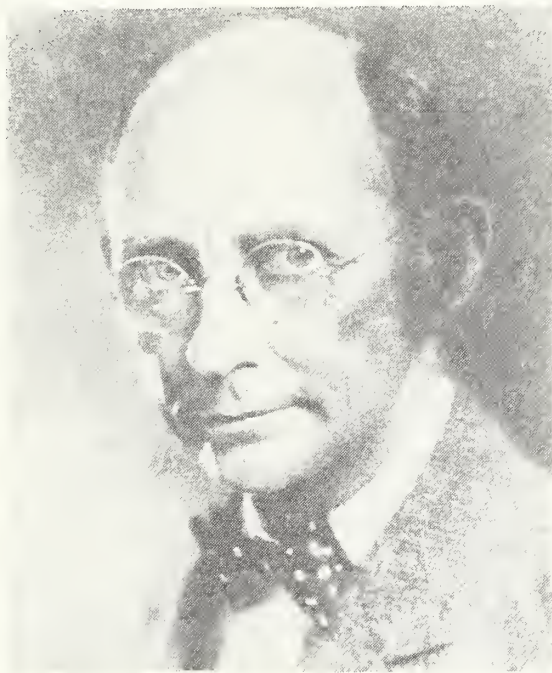
Arthur Steindler, M. D.

Dr. Arthur Steindler ended his active career as head of the Orthopedic Department in the College of Medicine on Jan. 1, 1949. The word active is used advisably, since he will continue to carry on his prodigious work as he has in the past. In December 1948, the State Board of Education conferred upon him the well deserved title of "Distinguished Service Professor of Orthopedic Surgery," the first such title ever bestowed upon a retiring member of the medical faculty.

It is not possible in a few sentences to express the great contributions of this versatile, lovable man to this state and to the world. His inimitable wit and keen sense of humor, kindness, generosity, and his deep understanding have been, are and ever will be a source of joy and stimulation to those who know him. His skill and accomplishments in surgery have made him one of the most respected and admired men of his time.

He is the last of that rather small group of distinguished men who brought about the great progress in the College of Medicine during the second and third decades of this century. His contributions to its flowering are numerous, and it would be impossible to state which was the most outstanding, but he did do the one thing which made the institution possible. The greatest problem faced in the early days was lack of clinical material for teaching. Dr. Steindler came to the University at the time the Perkins law, designed for the crippled child, went into effect. Through his skill, and particularly through his understanding and love of humanity, he made that law work so well that, when it was amended to include all age groups, there was not one dissenting vote in the legislature. He thereby made available a supply of teaching material to the College of Medicine to the everlasting benefit, not only to the College but to the citizens of the state as well.

Doctor Steindler's health is excellent and his energy is boundless. It is a joy to all who know him that he is to continue on as the young man he always has been.



Clarence E. Van Epps, M. D.

Dr. Clarence E. Van Epps was born near Clinton in 1875 and attended Iowa State College, where he received a B.Sc. degree in 1894. In 1897 he received an M.D. degree from the University of Pennsylvania.

In his postgraduate training days, the diversity of interest first appeared which has helped make him so well known to Iowa physicians. After a year's training in internship at Old Blockley in Philadelphia, he spent time at Wills Eye Infirmary, Delaware State Hospital and in Vienna.

In 1904 he returned to Iowa City and until 1919 was Professor of Medicine. During World War I he served as a Major in the Medical Corps of the United States Army, and, when he returned to civilian life, he became Professor of Neurology and Head of the Department of Neurology in the College of Medicine. His career during all these years has been an amazing one. The breadth of his interest, professional and general, has made it impossible for him to be satisfied with the command of his one specialty, but has driven him to seek out the new on every service in the hospital. Students have loved him well; for his patience, for the painstaking thoroughness of his approach to each new diagnostic problem, for the sharpness of his tongue and wit, which always leaves them exhilarated after the sting has passed, and for the weight of logic which he brings to bear.

Books, pictures, sports, kindness and everlastingly keeping up with things new are so much a part of "Van" that one seldom thinks of them as his hobbies. He has given a large art collection to the University School of Fine Arts and many books to the Iowa City Library, but his philosophy of kindness, and pleasure in honest effort has been passed on to the hundreds of men and women who have studied with him through the years.

Dr. Van Epps retired as Head of the Department of Neurology in 1946. One who has known him well would understand that formal retirement would make no difference to Van—he still is to be found on the wards at the hospital, making his rounds.

THE ELECTROCARDIOGRAPHIC CHANGES ASSOCIATED WITH MYOCARDIAL INFARCTION

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Iowa City

The electrocardiogram serves one of its most useful purposes in furnishing objective evidence of myocardial infarction. The knowledge concerning it has increased to enormous proportions since its introduction into clinical medicine nearly four decades ago. It is no longer an empiric science, although much of the knowledge upon which the practical interpretation of the tracings is based has been acquired through clinical experience. Nevertheless, the complexity of the subject, particularly as our knowledge has advanced by the use of multiple exploring leads, makes it mandatory that the fundamental principles upon which it is based be understood if its full potentialities are to be utilized. It is the purpose of this discussion to present in as concise a manner as possible certain of these fundamental aspects of electrocardiography as they apply to the abnormalities associated with myocardial infarction.

The changes seen in myocardial infarction involve abnormalities in the form of the ventricular complex, due to alterations in the relative order in which different parts of the ventricular muscle pass through the various stages of activation and recovery. Such alterations can be determined by no other means than an electrocardiogram, but since there are no mechanical equivalents here, as there are in the cardiac arrhythmias, for example, the abnormalities recorded are of clinical importance only from the implications which they suggest. It is to be borne in mind constantly that electrocardiographic abnormalities are not diseases.

When the essential principles of the series of events which occur in the normal process of excitation and recovery are understood, it is possible to visualize the manner in which infarction alters the electrocardiogram, and it thereby becomes unnecessary to attempt to remember certain supposedly diagnostic patterns of infarction. Each tracing can be considered upon its own individual merits. In general, abnormalities in the QRS complex are more reliable evidence of infarction than are alterations in the RS-T and T deflections. For this reason, major emphasis will be directed to the electrical events associated with ventricular activation, which is represented by the QRS deflection. The electrical events of the recovery

process, represented by the RS-T and T deflections, will be mentioned but not described in detail.

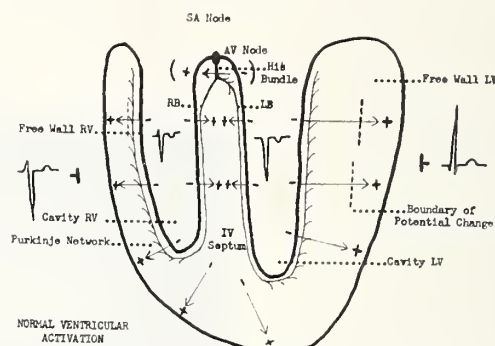


Fig. 1. Schematic Representation of Normal Ventricular Activation. (See text for explanation.)

Figure 1 represents in schematic fashion the electrical events concerned in the production of the electrocardiogram. It will be remembered that the excitatory process arises in the sinoauricular (SA) node and is conducted successively through auricular muscle, the auriculoventricular (AV) node, the His bundle and its right and left branches in the septum, the Purkinje network, and finally the ventricular muscle itself. The cardiac impulse spreads through the septum from both sides more or less simultaneously except for the initial brief instant when the left bundle branch breaks into its arborization first. Here, then, the septum is initially activated from left to right, as shown in parenthesis in the diagram. In the free walls of the ventricles, the impulse spreads from within outwards. As the excitation wave advances, there is a boundary between active and resting muscle, which makes the potential of points ahead of it positive and the points behind it negative. Therefore, except in the brief period of initial activation of the septum from left to right, the ventricular cavities are everywhere negative throughout the QRS interval. Consequently, a lead within the right ventricular cavity possesses a small initial positive deflection (R wave), due to the early activation of the septum from left to right and a larger, wider negative deflection (S wave) throughout the remainder of the QRS interval. A lead within the left ventricular cavity is at all times in a field of negative potential and is composed of a QS deflection only. In a lead from epicardial surface an R deflection represents the forces of activation of the muscle between the electrode and the ventricular cavity. When the process reaches the muscle subjacent to the electrode, the boundary between active and resting muscle disappears at that point, and the potential of the electrode assumes the potential of the underlying ventricular cavity. The peak

of the R wave, therefore, separates the QRS interval into two parts. If a Q wave is the initial deflection, it means simply that muscle elsewhere than that subjacent to the electrode in question has passed into the active phase ahead of it and that the initial negativity of the underlying ventricular cavity has been transmitted to the exploring electrode. On the other hand, if the excitatory process is still spreading through muscle elsewhere at the time that the peak of R is inscribed, the negativity of the underlying ventricular cavity outlasts it and an S wave is inscribed. Since the right ventricular mass is much less than that of the left, it is easy to see that, normally, a tracing from the epicardial surface of the right ventricle will be dominated by a small, early R wave (containing both septal and free wall components) and a larger, wider S wave, while a tracing from the epicardial surface of the left ventricle will be dominated by a somewhat later, much larger R wave, often preceded by a small Q wave and followed by an S wave. Between these points there is an intermediate or transitional zone in which the complexes represent a mixture of the potential variations of the right and left ventricles. These explanations for the form of the QRS complex, although briefly presented, are substantially those described by Wilson and associates¹ from experimental studies in dogs. They apply exactly to the human precordial electrocardiogram except that the potential variations at the epicardial surface are much greater than those recorded over the precordium, and the indirect leads used in clinical practice reflect the potential variations of a much larger area of the heart than do the direct experimental leads.

tions specified by the Committee of the American Heart Association for the Standardization of Precordial Leads.² It will be seen that the ventricular complexes of precordial leads from the right side of the precordium (V₁ and V₂) are similar to those shown diagrammatically in Figure 1 except that here T waves are upright. The R wave is narrow and small and the S wave is deep and broad, while in leads from the left side (V₅ and V₆) the R wave is tall, broad and its peak is later. It is followed by a small, narrow S wave. The T waves are likewise upright. Not shown is a small Q wave, which is normally often present in left chest leads. Between these points is the transitional zone, which in this illustration is at V₃, where the deflections are a combination of those obtained from either side. The augmented unipolar limb leads are taken by the method of Goldberger.³ Such leads are valuable for comparing the potential variations of the extremities with those of the right and left sides of the precordium and for establishing relations between them and deflections of the standard limb leads. They are of particular value in establishing the significance of Q waves in standard limb leads II and III. Space does not permit further discussion of these or other leads at this point, but in patients in whom myocardial disease is suspected it is recommended that the standard limb leads, the augmented unipolar limb leads and a full set of standard precordial leads be recorded routinely. It is not to be inferred that the electrocardiograms shown in Figure 2 are the only normal pattern. In fact, the T waves in V₁ are often negative in adults as well as children, to mention but one variable of the normal pattern.

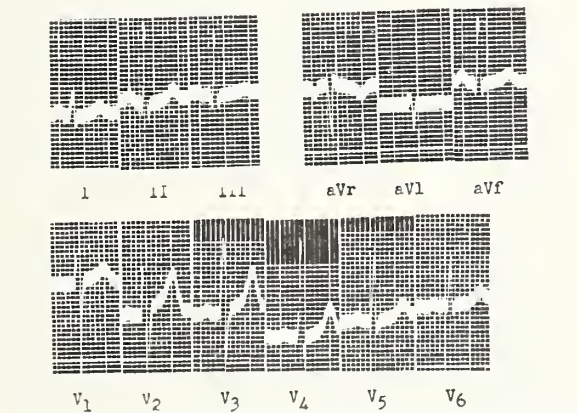


Fig. 2. Normal Electrocardiogram. (No. 34549, Female, Age 22, 6-14-48. Heart in Vertical Position.)

Figure 2 represents a normal electrocardiogram and includes the standard limb leads, the augmented unipolar limb leads and six unipolar (V) precordial leads, recorded from the standard posi-

In myocardial infarction the electrocardiographic abnormalities are a direct manifestation of the secondary changes in the myocardium, rather than the primary changes in the coronary arteries. Furthermore, to a large extent, infarction primarily involves the interventricular septum and the left ventricular wall. Isolated infarction of the right ventricular wall is unusual; infarction, when it occurs here, has usually spread from the septum. Through a series of studies on dogs before and after coronary ligation, Wilson and associates^{1, 4-8} demonstrated the close correlation between the QRS-T pattern in multiple direct leads from the epicardial surface and the distribution of the infarct at autopsy. These studies form the basis of the interpretation of multiple precordial leads in human myocardial infarction. Ligation of a major coronary artery produces a lesion characterized by three concentric zones: the central zone of transmural infarction, a mar-

ginal zone of infarction confined to a portion of the wall, usually the subendocardial layer, and an outlying zone of ischemia. In smaller lesions only the marginal and ischemic zones usually appear, or the infarct may be patchy in distribution. In general, infarcts are more extensive in the subendocardial layer than in the subepicardium.

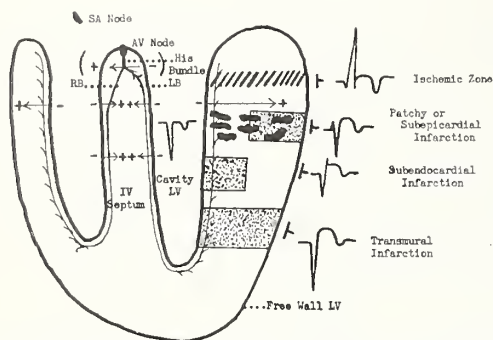


Fig. 3. Schematic Representation of the Electrocardiographic Changes in Myocardial Infarction. (See text for explanation.)

The classic changes of myocardial infarction are depicted in a schematic manner in Figure 3. The QRS complex recorded from the central zonal area of transmural infarction consists of a smooth QS deflection if all underlying muscle is dead, or a notched QS deflection if some muscle has been spared. It is apparent from the diagram that this deflection corresponds to that from the cavity of the left ventricle, and, therefore, the infarcted zone merely serves as a "physiologic window" for the conduction of cavity potentials to the surface through muscle incapable of activation. In the marginal zone the deflection is characterized by an abnormal QR complex, corresponding to infarction of the subendocardial layer, with more or less sparing of the subepicardial layer. The abnormally large Q wave represents cavity potentials transmitted to the surface during the time the excitation process traverses or circumvents the subendocardial infarcted muscle, while the abnormally small and late R wave represents positive potential during the period of activation of the overlying and more intact subepicardial muscle. When the infarct is patchy in distribution or mainly subepicardial in location, an abnormal RS deflection occurs. The small initial R wave represents positive potential from the activation of more intact subendocardial muscle, or muscle remaining more or less intact in a patchy fashion, while the S wave represents negative cavity potential transmitted through the destroyed subepicardial layer of muscle. Over the ischemic zone the QRS complex is relatively normal, but cove-shaped negative T waves are apparent.

Characteristic changes also occur in the RS-T and T deflections, as indicated in the diagram. Early in the stage of infarction pronounced elevation of the RS-T junction occurs, the RS-T segment ascends to a peak in a straight or a convexly curved line, and the T wave returns sharply to the isoelectric line. The RS-T displacement soon begins to recede, and the terminal limb of the T wave dips below the isoelectric line. As the RS-T junction approaches the isoelectric line, the T wave becomes deeply inverted and with the upward convexity of the RS-T segment takes on the cove-plane appearance. Because the zone of ischemia extends beyond the central and marginal zones, T wave changes are often present in leads beyond those showing QRS abnormalities.

Abnormalities in the form of the QRS, RS-T and T deflections, singly or in combination, often remain as residual changes of infarction. Pronounced alterations in the QRS complex seldom disappear completely, and residual changes in the T waves are not unusual years after myocardial infarction. Persistent R-ST displacement rarely occurs.

Essentially then, the changes in the ventricular complex produced by myocardial infarction are always the same. The potential variations at the epicardial surface of the infarcted region are transmitted to adjacent parts of the body, and therefore the age, size and location of the infarct, the position of the heart in the thorax, and the position of the electrode determine the leads in which the characteristic changes occur. The attempt has been made to present in Figure 3 a schematic representation of these changes as they appear in clinical precordial leads, and not precisely as they were determined experimentally with direct leads in the work of Wilson and associates.^{1, 4-8} Not indicated in the diagram is the fact that potential variation of parts of the body on the side of the heart opposite to the one involved by infarction are, as regards their general character, the inverse of those that occur at the surface of the infarct.

It is an accepted fact that the data furnished by multiple precordial and other exploring leads in the diagnosis and localization of myocardial infarction in the human are valid. The sharp delineation between the central, marginal and ischemic zones, which is apparent in the experimental direct leads, gives way to a more gradual transition in clinical indirect leads because of overlapping effects. The most exhaustive correlative study of the electrocardiographic and pathologic findings in human myocardial infarctions where the proper type of multiple exploring leads

has been used is now in the process of publication by Gordon B. Myers and associates, and two of their reports^{9,10} have appeared recently. The diagnosis of myocardial infarction can be made unequivocally from the electrocardiogram only when the classic changes already described appear in the QRS complex in association with the typical RS-T or T changes. Lesser changes are not pathognomonic and other evidence is often required, which may be wholly clinical, or derived in part from changes in serial electrocardiograms. Changes in the QRS complex are more diagnostic than changes in T waves alone. However, if clinical evidence supports the diagnosis, and serial tracings confirm the progressive and rapid T wave changes, the evidence for infarction is strong.

Wilson, Rosenbaum and Johnston¹¹ have classified the electrocardiographic patterns which are considered diagnostic of myocardial infarction on the basis of the leads in which the characteristic changes of the ventricular complex occur and have given them names indicating the areas of the ventricular wall involved. Our experience with this system at the University Hospitals has been quite extensive, and we have had many instances of confirmation at autopsy, not only of the diagnosis but of the correct localization of the infarct as well. Representative examples of several of the commonly occurring patterns follow.

Extensive Anterior Infarction: The characteristic changes are present in all of the precordial leads except in leads I and aVI and possibly V₁. Shown in Figure 4 are the electrocardiograms of a woman, aged 63 years, who had a normal tracing when first seen on Dec. 19, 1947. She sustained a coronary accident on Jan. 3, 1948, and the next tracing, recorded on this date, reveals pronounced changes characteristic of myocardial infarction in the ventricular complexes of V₂ through V₆ and in lead I. The QS deflection in lead III might suggest posterior infarction, but it was introduced by the electrocardiographic position of the heart, and, had the unipolar limb leads been taken, this would have been apparent. Furthermore, in the next tracing on the following day lead III no longer suggested posterior infarction. At this time, the characteristic rapid changes in the RS-T and T deflections are apparent in all of the precordial leads. They were much more marked on the day before. In V₆ a substantial R wave has returned, indicating here that, on the day before, the infarcted muscle was incapable of activation, but it was not destroyed and subsequently recovered its excitability. The patient died from congestive heart failure on Jan. 19, 1948, and at autopsy the

left side of the interventricular septum and the anterior wall of the left ventricle near the apex were extensively involved by a transmural infarct.

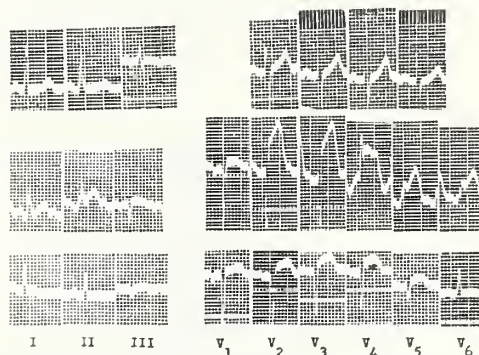


Fig. 4. Extensive Anterior Myocardial Infarction. (Normal EKG No. 37751, 12-19-47; No. 32836, 1-3-48; No. 32837, 1-4-48.)

In Figure 5 is shown the electrocardiograms of a man, aged 62 years, who gave a history compatible with myocardial infarction in June 1947. The tracing shown, taken a year later on June 24, 1948, indicates that he had had an extensive anterior myocardial infarction. In lead I, there is an abnormally large Q wave and a low T wave. The T wave changes extend throughout the precordial leads, and characteristic QRS abnormalities are apparent in V₂ through V₆.

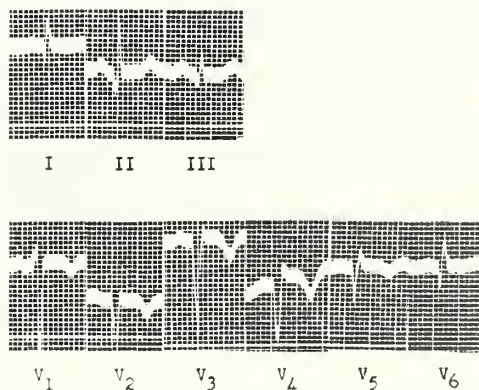


Fig. 5. Extensive Anterior Myocardial Infarction. (No. 34668, 6-24-48.)

The electrocardiograms in Figure 6 are an excellent demonstration of extensive anterior myocardial infarction involving the subendocardial layer of muscle. Tracings were recorded above and below the standard precordial positions to be certain that those shown were not reflecting the potential variations of the marginal zone, and at no point were the changes of transmural infarction apparent. The patient was a man, aged 59 years, who had a normal electrocardiogram when first seen on April 20, 1948. He experienced severe anterior chest pain three weeks prior to the date of the second tracing and again on

Dec. 6, 1948. The tracings shown display the changes characteristic of subendocardial infarction; namely, the diminishing height of the R waves in V_2 , V_3 and V_4 , and the appearance of significant Q waves in these leads, and in leads I and aVf, together with the widespread cove-plane T deflections.

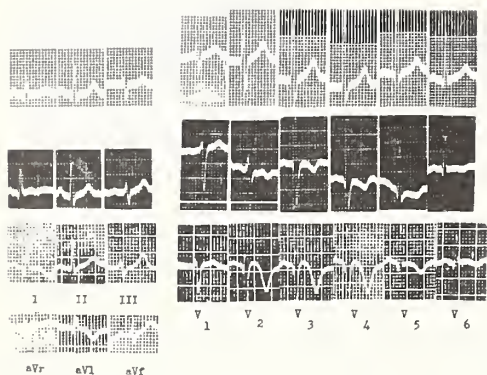


Fig. 6. Extensive Anterior Subendocardial Myocardial Infarction. (4-20-48; 11-22-48; 12-9-48.)

Anteroseptal Infarction: The typical alterations are confined to one or more of the first four precordial leads, but leads I and aVf do not reveal them unless there has been sufficient clockwise rotation of the heart upon its longitudinal axis to refer the potential from the infarcted area toward the left arm. Since T wave changes reflecting the ischemic zone characteristically occur in leads beyond those displaying typical QRS alterations, leads I, aVf and V_5 and V_6 often reveal negative T deflections. These latter changes are not unequivocal evidence of infarction, however, and it is in this location that the standard limb leads and one apical precordial lead fail to demonstrate the characteristic alterations.

The electrocardiograms in Figure 7 are those of a man, aged 82 years, whose myocardial infarction occurred on Feb. 19, 1948. The two tracings shown, the first on the date of infarction and the second on the following day, reveal the characteristic changes of transmural infarction in V_2 through V_4 , and the negative T waves of the ischemic zone in leads V_5 , V_6 and I. Obviously, the characteristic changes of infarction do not exist in these latter leads, and electrocardiographic confirmation of the diagnosis would have been lacking had only the standard limb leads and one apical lead been used.

Anterolateral Infarction: The diagnostic changes are in leads V_5 , or in V_4 , V_5 and V_6 , or some combination of these leads, which does not include leads from the right side of the precordium. Similar changes are seen in leads I and aVf.

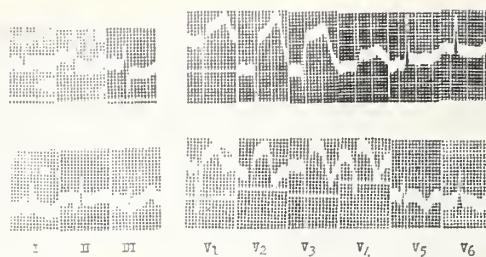


Fig. 7. Anteroseptal Myocardial Infarction. (No. 33266, 2-19-48; No. 33286, 2-20-48.)

The electrocardiograms in Figure 8 are those of a 71 year old janitor, whose coronary accident occurred on Jan. 3, 1948. The tracings shown were taken on Jan. 7, 8 and 10, 1948. They reveal the characteristic serial changes of anterolateral infarction in leads V_4 , V_5 , V_6 and I. Since the R waves in these leads were never perceptibly altered and the Q waves in leads V_5 and V_6 were only transient, it is apparent that the infarct was subendocardial in distribution and that recovery was rapid. The patient's course was uneventful, although the negative T waves persisted. He returned to his work, only to suffer a second myocardial infarction six months later, and tracings at that time revealed it to be anteroseptal in location. Because of limited space the entire series is not reproduced. Death occurred and autopsy confirmed the electrocardiographic interpretation. The anterolateral infarction, represented in Figure 8, consisted of subendocardial scarring in this area of the left ventricular wall.

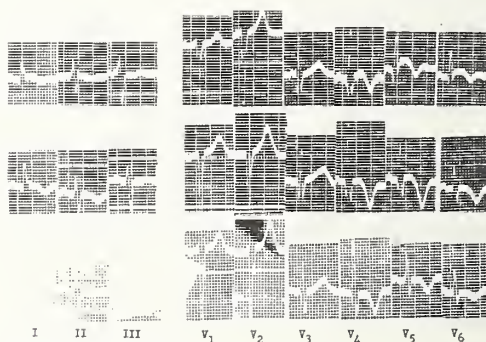


Fig. 8. Anterolateral Myocardial Infarction. (No. 32873, 1-7-48; No. 32877, 1-8-48; No. 32906, 1-10-48.)

The unipolar limb leads were not recorded in most of the above series of electrocardiograms. It is obvious that, had they been recorded, they would have shown the changes mentioned, since otherwise the abnormalities present in lead I could not have arisen.

Plain Posterior Infarction: Diagnostic changes are evident in leads II, III and aVf, and in leads from ventricular levels of the esophagus. Anterior precordial leads often display the inverse

effect, namely, RS-T depression early, and later, abnormally large R and T waves, particularly in leads from the right side of the precordium.

The electrocardiograms shown in Figure 9 are those of a man, aged 54 years, who had a normal tracing when first seen on Dec. 10, 1948. His coronary accident occurred on Jan. 5, 1949, and a tracing on Jan. 7, 1949, revealed the characteristic abnormalities of posterior infarction in leads II, III and aVf, together with slight depression of the RS-T junction in precordial leads V₂, V₃ and V₄. The esophageal leads obtained at ventricular levels, E₅₀ through E₆₅ likewise are characteristic and furnish an excellent demonstration of the fact that the potential changes reflected in leads II, III and aVf were referred from the posterior aspect of the infarcted ventricle. The ventricular complex in leads from auricular levels of the esophagus, E₃₅ through E₄₅, although appearing much like those from lower levels, are not evidence of infarction. They are essentially

normal for leads at this level. The tracings on Jan. 26, 1949, show the expected serial changes of infarction already discussed. It is to be noted that the RS-T displacement in leads V₂, V₃ and V₄ no longer exists, and that the T waves in the precordial leads are generally higher than on Jan. 7, 1949.

There are several other commonly occurring patterns, illustrations of which will not be shown for reasons of limited space.

Posterolateral Infarction: This pattern differs from plain posterior infarction only in that there are, in addition, typical changes in leads V₆, or V₅ and V₆, and usually negative T waves in leads I and aVl as well.

High Anterolateral Infarction: Diagnostic changes are apparent in leads I and aVl, and in precordial leads from the left side, recorded higher up than the standard precordial positions, and nearer the left shoulder than leads V₄, V₅ and V₆.

Posteroseptal Infarction: The characteristic changes are evident in leads II, III and aVf, as in posterior infarction, in lead V₆ (ensiform lead), and often V₁, indicating septal involvement.

It is possible many times to diagnose multiple infarcts by the use of the several leads employed, and one such example is shown in Figure 10. The patient, a man, aged 66 years, sustained severe precordial pain on Dec. 25, 1948. The electrocardiogram on Dec. 28, 1948, revealed the characteristic changes of posterior infarction in leads II, III and aVf. In the precordial leads it is noted that the height of the R wave progressively diminished in leads V₂, V₃ and V₄, while it is abnormally small in V₅. The small Q wave in leads V₅ and V₆ is of questionable significance, but there is abnormal elevation and contour of the RS-T deflection in leads V₃ through V₆. A diagnosis of anterior and posterior infarction was therefore made and at autopsy on Jan. 2, 1949, there was an extensive anteroapical infarct which had extended to the posterior aspect of the left ventricular wall. The septum was not involved.

As Wilson¹¹ states, the primary object of this rather elaborate classification is not to make the diagnosis of the location of infarcted muscle more precise, since there is little reason to suppose that the exact location of the part of the ventricular wall involved has any special significance. The main purpose is to show that it is necessary to employ a full set of the usual clinical leads, and, when occasion demands, additional leads as well, to obtain unequivocal evidence of infarction. By so doing, the objective proof of infarction by the electrocardiogram will be demonstrated more often and fewer mistakes or unjustified conclusions will

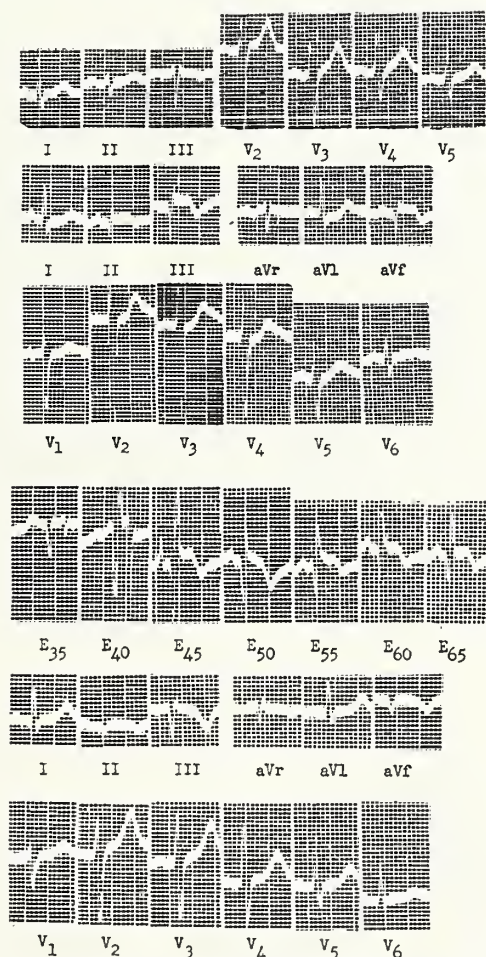


Fig. 9. Plain Posterior Myocardial Infarction. (Male, Age 54, Normal Electrocardiogram, 12-10-48; No. 36538. Severe substernal pain on 1-5-49; 1-7-49, No. 36738; Esophageal Leads, 1-7-49, No. 36768; 1-26-49, No. 36959.)

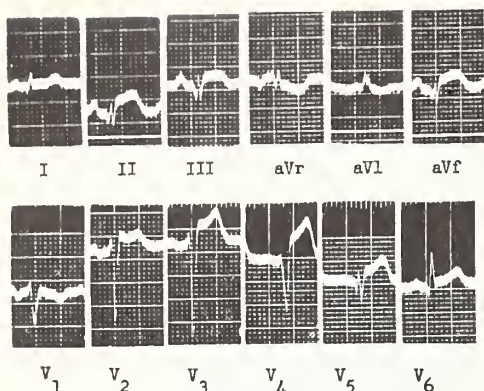


Fig. 10. Anterior and Posterior Myocardial Infarction. (EKG No. 36692, 12-29-48.)

be drawn from minor abnormalities appearing in a limited number of leads which do not explore the potential variations of the heart in such detail.

These remarks regarding myocardial infarction apply only to those changes which occur in the presence of normal bundle branch conduction. The problem of bundle branch block is a subject within itself, but it will suffice to say here that infarction can be diagnosed by an electrocardiogram in the presence of right bundle branch block, although the changes in the ventricular complex are not precisely those which have been described. In the presence of left bundle branch block, however, infarction does not give rise to these characteristic modifications except under the special circumstance of transeptal infarction. This is unusual and therefore great care must be exercised in interpreting the changes seen in electrocardiograms showing left bundle branch block if an unjustified conclusion of infarction is to be avoided.

Conclusions

This discussion is not intended to represent a complete review of the electrocardiographic aspects of myocardial infarction. Instead, the attempt has been made to point out the mechanism by which the changes due to infarction arise, and to call attention to the need for multiple leads in demonstrating them. The illustrations used reflect the typical changes of several of the more commonly occurring diagnostic patterns. In many instances, the changes will be less definite than those shown here and the leads which record the abnormalities will vary. The electrocardiographic positions of the heart introduced by rotation around the transverse, longitudinal and antero-posterior axis exerts a profound influence upon the normal configuration of the ventricular complex as well as on the position of the various leads which reveal the changes of myocardial in-

farction. This makes it all the more necessary to utilize multiple exploring leads in many patients.

No discussion of clinical electrocardiography should be concluded without remarking that it represents but one aspect of the evaluation of a patient with real or suspected heart disease. Since electrocardiographic abnormalities are not diseases, the diagnosis of heart disease is the responsibility of the physician, not of the electrocardiogram. Only when the electrocardiogram reveals unequivocal evidence of the sort limited to a particular disorder is a positive diagnosis justified on electrocardiographic evidence alone. Sensenbach¹² recently listed 47 conditions not due to primary heart disease which were capable of altering the electrocardiogram.

BIBLIOGRAPHY

1. Wilson, F. N., and others: Precordial electrocardiogram. *Am. Heart J.*, xxvii:19-85 (January) 1944.
2. Committee of the American Heart Association for the Standardization of Precordial Leads: Supplementary report. *Am. Heart J.*, xv:235-239 (February) 1938.
3. Goldberger, E.: Simple, indifferent, electrocardiographic electrode of zero potential and technique of obtaining augmented, unipolar, extremity leads. *Am. Heart J.*, xxiii:483-492 (April) 1942.
4. Wilson, F. N.; Johnston, F. D.; and Hill, I. G. W.: Interpretation of galvanometric curves obtained when one electrode is distant from heart and other near or in contact with the ventricular surface: observations on mammalian heart. *Am. Heart J.*, x:176-189 (December) 1934.
5. Johnston, F. D.; Hill, I. G. W.; and Wilson, F. N.: Form of electrocardiogram in experimental myocardial infarction; early effects produced by ligation of anterior descending branch of left coronary artery. *Am. Heart J.*, x:889-902 (October) 1935.
6. Wilson, F. N.; Hill, I. G. W.; and Johnston, F. D.: Form of electrocardiogram in experimental myocardial infarction; later effects produced by ligation of anterior descending branch of left coronary artery. *Am. Heart J.*, x:903-915 (October) 1935.
7. Hill, I. G. W.; Johnston, F. D.; and Wilson, F. N.: Form of electrocardiogram in experimental myocardial infarction; later effects produced by ligation of right coronary artery. *Am. Heart J.*, xvi:309-320 (September) 1938.
8. Wilson, F. N.; Johnston, F. D.; and Hill, I. G. W.: Form of electrocardiogram in experimental myocardial infarction; additional observations on later effects produced by ligation of anterior descending branch of left coronary artery. *Am. Heart J.*, x:1025-1041 (December) 1935.
9. Myers, G. B.; Klein, H. A.; and Stofer, B. E.: I. Correlation of electrocardiographic and pathologic findings in antero-septal infarction. *Am. Heart J.*, xxxvi:535-575 (October) 1948.
10. Myers, G. B.; Klein, H. A.; and Hiratzka, T.: II. Correlation of electrocardiographic and pathologic findings in large anterolateral infarcts. *Am. Heart J.*, xxxvi:838-881 (December) 1948.
11. Wilson, F. N.; Rosenbaum, F. F.; and Johnston, F. D.: Interpretation of ventricular complex of electrocardiogram. *Advances in Internal Medicine*, ii:1-62, Interscience Publishers, New York, 1947.
12. Sensenbach, W.: Some common conditions, not due to primary heart disease, that may be associated with changes in electrocardiogram. *Ann. Int. Med.*, xxv:632-647 (October) 1946.

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ANTICOAGULANTS IN THE TREATMENT OF ACUTE MYOCARDIAL INFARCTION AND ITS COMPLICATIONS

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Introduction: Heretofore, logical treatment of an infarct of the heart has been limited by the inaccessibility of the heart to procedures aimed at improving or restoring diminished blood supply. Surgical approaches to myocardial infarction have included efforts to re-establish the heart's blood supply by bringing it in from adjacent sources and, in experimental animals, by excision of the infarcted area. The gains are still too small to justify the risks in the average patient with an acute infarct. In the decade since Solandt¹⁹ suggested using heparin for treatment of coronary thrombosis, the development of dicumarol has provided us with another anticoagulant which is both effective and inexpensive. It is fitting at this time to review the accepted ideas concerning the pathogenesis of infarction of the heart and the bearing of these ideas on the problem of the indications, contraindications and potential value of anticoagulant therapy. Prophylaxis with such potent anticoagulants, in ambulatory patients, is still too dangerous for general application.

Rationale of Therapy: Justification for the use of anticoagulant compounds in treating patients with acute myocardial infarction depends upon such considerations as the following:

1. The chief cause of myocardial infarction must be related to thrombosis.

2. Thromboembolic complications, both cardiac and systemic, must play a significant part in morbidity and mortality.

3. Anticoagulant therapy must reduce or prevent the spread of the initiating thrombus and the development of intraventricular mural thrombi and systemic venous thrombi with their attending threat of embolism.

4. Treatment with anticoagulant compounds must be practicable and without disproportionate risk.

This paper is a critique of the problem and a resume of some of the reported studies, notably that of Wright and his group of co-workers in their comprehensive investigation of the entire problem.²²

Pathogenesis of Infarction of the Heart: Ultimate solution of the problems of coronary thrombosis and myocardial infarction depends on solv-

ing the mystery of arteriosclerosis. In almost all instances, myocardial infarction is a sequel to coronary artery sclerosis. A few exceptions may occur such as the rare coronary artery embolism, ostial occlusion and thrombosis of coronary veins. Coronary thrombosis and myocardial infarction are not synonymous; myocardial infarction may develop as a consequence of organic narrowing of the coronary artery without thrombosis in 20 per cent of the instances.³ Such infarcts may develop acutely and have all the manifestations commonly ascribed to coronary thrombosis.² Occlusion of the coronary artery itself may arise from a thrombosis, an intramural coronary artery hemorrhage, arteriosclerosis with stenosis, syphilitic disease with obstruction of the coronary ostia, endarteritis and embolism. Coronary thrombosis may follow intravascular dissection of blood along the coronary artery, beginning with rupture of a subintimal capillary.^{20, 6} Thus, one of the mechanisms producing myocardial infarction is narrowing of vessels without acute thrombosis, and another may depend on thrombosis which has its initiation with hemorrhage into the wall of the artery. Where these mechanisms prevail, a reduction of coagulability of blood would be ineffective and might even be dangerous.

Complications: Regardless of such unusual mechanics of the initiating lesion, the majority of infarcts of the heart are the direct result of thrombosis of one or more branches of a coronary artery. Two important sequels are related to the clotting mechanism: (1) the development of intraventricular mural thrombi and subsequent embolism, and (2) the propagation of the clot within the coronary artery with secondary spread of the infarct. Since the improvement to be expected in therapy with anticoagulants is chiefly the prevention of these two complications, their role in morbidity and mortality of acute myocardial infarction requires evaluation. In a study of 300 instances of infarction of the heart proved at autopsy,^{1, 2, 3} it was demonstrated that embolism was the direct cause of death in 21 and a contributing cause in 57 others, making a total of 78 patients or 26 per cent where an embolism was a significant factor in causing death. Similar figures have been tabulated by Nay and Barnes¹² who reported vascular complications in 37 per cent of 100 cases. They were a major cause of death in 4 of their 13 fatal cases. Hellerstein and Martin¹⁰ have tabulated many of the earlier reports and added data on 160 cases. They found that 45 per cent had thromboembolic episodes and that peripheral infarcts were a main or contributory cause of death in 27 per cent. In this con-

nection, it has been suggested^{1, 2, 3} and demonstrated¹⁴ that there may be an enhanced coagulability of the blood of the acute myocardial infarction. The figures of Nay and Barnes have been compared with a similar group treated with anticoagulant drugs by Parker and Barker.¹⁵ There is no reason to expect any improvement in sequelae not related to thromboembolic complications.

American Heart Association Study: The largest series of cases yet studied with anticoagulant therapy for acute myocardial infarction has been reported by the A.H.A. committee on the first 800.²² In the main, their findings verify and extend the earlier observations of Nichol and Page,¹³ Peters, Guyther and Brambel¹⁶ and Wright.²³ The plan of the study was to compare two approximately equivalent groups of patients with acute cardiac infarcts, one treated by standard methods and the other with the same methods plus heparin and dicumarol. Patients admitted to the various participating hospitals on even days constituted the control group; those admitted on odd days constituted the group treated with anticoagulants.

Their directions for anticoagulant therapy are as follows: "(1) Heparin may be given for the first 48 hours or more if desired. (2) Prothrombin determinations (see Appendix) are to be done each day, and no dicumarol should ever be ordered unless the morning prothrombin report is available. (3) Dicumarol, 200 to 300 mg. daily, should be given until the prothrombin time is between 30 and 35 seconds. (4) Dicumarol is withheld if the prothrombin time is 35 seconds or more. Then no drug is given until the prothrombin time is again down to 30 seconds or less, after which the drug is again given cautiously in 100 mg. doses. (5) The Link-Shapiro technic,^{5, 18} using undiluted whole plasma or the Quick method,¹⁷ is to be used for determining the prothrombin clotting time, and it is suggested that the Link-Shapiro method, using 12.5 per cent diluted plasma, be employed as an additional check or safeguard. All prothrombin times are given in terms of the Link-Shapiro (undiluted) method. (6) Unless contraindications arise, the dicumarol therapy is to be continued in the chosen cases over a minimum period of 30 days, preferably 30 days after the last thromboembolic episode. (7) In instances of hemorrhagic manifestations, the use of synthetic vitamin K preparations in doses of 60 to 75 mg. and transfusions of free whole blood (may be citrated) are recommended."

Criteria for Successful Treatment: The two

criteria for successful therapy are reduction of thromboembolic complications and of the death rate. In Wright's control series,²² 24 per cent of the patients died, whereas only 15 per cent of the treated patients died. The greatest reduction in mortality occurred in patients who had suffered one or more thromboembolic complications. Such deaths occurred in 10 per cent of the control cases, but in only 3 per cent of the treated cases. Death as a result of non-thromboembolic complications occurred in approximately 14 per cent of the control group and 12 per cent of the treated group. The reduction in death rate was greatest during the first and second weeks, but there was appreciable improvement during the third and fourth week of treatment. Anticoagulant therapy should be initiated at any time a patient presents himself within two weeks of the acute attack and should be continued for one month after acute infarction occurs. In addition to the benefits gained from reduction of thromboembolic fatalities, hemiplegia, chronic venous insufficiency and residual myocardial damage from subsequent infarction may be reduced in incidence and severity.

Thromboembolic accidents recognized clinically occurred in 36 per cent of the control cases, but in only 14 per cent of the patients treated with anticoagulants. Although younger patients have thromboembolic complications frequently, they are not as apt to be fatal as in older persons. Even with a high proportion of such accidents, the crude death rate of both treated and control patients was around 11 per cent for those in their fifties, 25 per cent for those in their sixties and 35 per cent for those in their seventies. The greatest reduction in mortality occurred in patients 60 years of age and older.

The development of mural thrombi is uncommon within the first three days after acute myocardial infarction in patients who die and presumably in those who recover. From the fourth to the seventh day it becomes increasingly common, and, thereafter, the majority of patients dying with recent myocardial infarction, up to and including the third month, have mural thrombi.³ Peripheral embolism from a mural thrombus occurs rarely during the first week and with the highest rate of frequency during the second week, with a gradually diminishing frequency to the end of the third month. In Wright's series, thromboembolic complications were most common during the second week.²² They were next most common during the first week, and they diminished in frequency in the third and fourth week. There was an impres-

sive reduction in the incidence of thromboembolic complications in the treated group. Extensions or new myocardial infarcts occurred in about 15 per cent of the untreated group and in about 5 per cent of the treated group; pulmonary infarcts, in 9 per cent of the control and 5 per cent of the treated; cerebral infarcts, in 3 per cent of the control and 1 per cent of the treated, and the same for peripheral embolic complications. Venous thrombi occurred in 5 per cent of the control and about 2 per cent of the treated patients.

Discussion

Potential Risks: There is naturally much concern with the potential danger in such a radical form of treatment. What is the real risk of hemorrhage? What, if any, is the effect of anticoagulant therapy on the soundness of the healing process and the risk of inducing or facilitating the occurrence of rupture of the myocardium? In the above quoted series, the incidence of hemorrhagic manifestations unrelated to coagulants was 6 per cent in the control group and slightly more than 12 per cent in the treated group. Even when hemorrhage occurred, it was mild or of moderate severity in all except 1 of 30 patients. As far as the healing of the myocardium is concerned, there is no evidence from experimental work on dogs that dicumarol impedes healing in the myocardium and thus increases the danger of rupture of the wall of the ventricle.⁴ Until the reports from the postmortem studies are available, the potential risk of rupture will be unknown.

What are the reasons for the thromboembolic accidents in the treated patients? Are the therapeutic failures a result of inadequacy in the plan of treatment or of failure to achieve the desired level of reduced coagulability of blood? An answer to this question is not yet available in definitive form. It has been the general experience that a safe and effective therapeutic range is between 30 and 50 seconds by the Link-Shapiro modification of Quick's one stage method. This range may be interpreted as a prothrombin activity of between 10 and 20 per cent. When heparin is used, the clotting time should be approximately three times the normal value as determined by the Lee-White method. In this regard, it is of note that only 4 of 38 thromboembolic complications occurred in patients whose prothrombin time had been maintained at levels of 30 seconds or more for at least three days preceding the appearance of a complication. It is possible that emboli may be released from mural thrombi which followed earlier infarcts or may come from

thrombi in the auricles, which are by no means rare.³

It has been suggested that psychologic factors may have influenced recovery in the treated group where patients were the center of much attention, but it is difficult to understand how this could have influenced the incidence of thromboembolic episodes. There is no convincing evidence that heparin or dicumarol have coronary dilating properties, though it has been noted that pain may subside rapidly following administration of heparin and Gilbert has suggested coronary dilating effect for dicumarol in dogs.⁹

It cannot be emphasized too frequently that therapy with anticoagulants is a hazardous process, even with the most meticulous and conscientious laboratory control under the regulated environment of a hospital. There is no known substitute for daily prothrombin determinations nor any clinical guide which will enable one at the bedside to estimate whether or not the coagulation of the blood has been reduced to the desired level or is in danger of going into the range where clinical hemorrhage presents a definite and hazardous risk. For that reason, treatment of patients with coronary thrombosis and acute myocardial infarction can never be carried out except under the auspices of a properly run hospital, with laboratory facilities in the hands of trained technicians. There is no permissible justification for the use of anticoagulants in the home treatment of patients, and, unless the dosage of such materials as dicumarol and heparin can be determined each day on the basis of the actual status of the coagulability of the blood in that person at that time, anticoagulant therapy is absolutely contraindicated. It is still a matter for future study to demonstrate whether use of anticoagulant drugs will ever have general applicability in treating ambulatory persons as a prophylactic measure. At the present time, it is out of the question.

Summary and Conclusions

1. Anticoagulant therapy has been shown to reduce the incidence and severity of thromboembolic accidents following in the wake of acute infarction of the heart.²²

2. In controlled studies, the mortality has been reduced significantly.

3. Treatment should be instituted at any time a patient is first seen within two weeks of the onset of acute myocardial infarction and continued until four weeks after the attack.

4. *Anticoagulant treatment is dangerous and should never be used unless there is DAILY check on blood prothrombin levels by competent labora-*

tory personnel. It is necessary to have the patient hospitalized.

5. For early cases, dicumarol alone is effective, but, since there is a one or two day delay in obtaining full effect after the drug is administered, heparin may be used for its rapid effect.

6. There is some risk of hemorrhage, even with meticulous laboratory control, but it is minor in comparison with the gains from prevention of thromboembolic events. Unless a hemorrhagic state exists, anticoagulants are not contraindicated.

7. The conventional forms of therapy must be carried out and not suspended because of anticoagulant therapy.

8. Further work will probably cause some alteration in our concepts at this moment. For the present, one must balance the grave risks, the laborious technical control, the cost of hospital care against the real benefit and brightened outlook in using anticoagulant therapy in acute infarction of the heart.

APPENDIX

Prothrombin Determinations

Procedure for the determination of the prothrombin time of whole plasma is as follows: 4.5 milliliter of freshly drawn venous blood, using special precautions to avoid trauma, are added to 0.5 milliliter of 0.1 m/10 molar sodium oxalate. Clear plasma is obtained by centrifuging at low speed for five minutes. Quickly, 0.1 milliliter of whole plasma (which has been kept at 37° C.) is added to 0.2 milliliter of a thromboplastin calcium chloride mixture (also at 37° C.) in a 13 by 100 mm. dry, clean test tube. The tube is quickly shaken. The time which elapses before the fibrin clot forms is noted with a stop watch. The identical procedure may then be repeated, using 0.1 milliliter of 12½ per cent plasma in place of whole plasma as a check. This is a method described by Link⁵ and his co-workers, based on the method of Quick, Stanley-Brown and Bancroft¹⁷ as used by Shapiro.¹⁸ The prothrombin time for whole plasma by this method is approximately 16 seconds, while that for 12½ per cent plasma averages 40 seconds. The thromboplastin used must be fresh and checked against a control for each test. To be accurate, each worker must construct his own curve on the basis of the clotting time characteristics of the thromboplastin which he uses. When this is done, he can readily establish values in time for dicumarol in therapeutic range⁵ or for normal limits.

BIBLIOGRAPHY

1. Bean, W. B.: Infarction of heart; morphological and clinical appraisal of 300 cases; predisposing and precipitating conditions. *Am.Heart J.*, xiv:684-702 (December) 1937.
2. Bean, W. B.: Infarction of heart; symptomatology of acute attack. *Ann.Int.Med.*, xi:2086-2108 (June) 1938.
3. Bean, W. B.: Infarction of heart; clinical course and morphological findings. *Ann.Int.Med.*, xii:71-94 (July) 1938.
4. Blumgart, H. L.; Freedberg, A. S.; Zoll, P. M.; Lewis, H. D.; and Wessler, S.: Effect of dicumarol on heart in experimental acute coronary occlusion. *Tr.Am.Physicians*, xl:227, 1947.
5. Campbell, H. A.; Smith, W. K.; Roberts, W. L.; and Link, K. P.: Studies on hemorrhagic sweet clover disease; bioassay of hemorrhagic concentrates by following prothrombin

level in plasma of rabbit blood. *J.Biol.Chem.*, cxxxviii:1-20 (March) 1941.

6. English, J. P., and Willius, F. A.: Hemorrhagic lesions of coronary arteries. *Arch.Int.Med.*, lxxi:594-601 (May) 1943.

7. Foley, W. T., and Wright, I. S.: Long term anticoagulant therapy for cardiovascular diseases. *Am.J.M.Sc.*, ccxvii:136-142 (February) 1949.

8. Foord, A. G.: Embolism and thrombosis in coronary heart disease. *J.A.M.A.*, cxxxviii:1009-1012 (December 4) 1948.

9. Gilbert, N. C., and Nalifski, L.: Effect of anticoagulant drugs upon coronary flow. *Proc.Central Soc.Clin.Research*, xxi: 5, 1949.

10. Hellerstein, H. K., and Martin, J. W.: Incidence of thromboembolic lesions accompanying myocardial infarction. *Am.Heart J.*, xxxiii:443-452 (April) 1947.

11. Loewe, L., and Hirsch, E.: Heparin in treatment of thromboembolic disease. *J.A.M.A.*, cxxxiii:1263-1268 (April 26) 1947.

12. Nay, R. M., and Barnes, A. R.: Incidence of embolic or thrombotic processes during immediate convalescence from acute myocardial infarction. *Am.Heart J.*, xxx:65-76 (July) 1945.

13. Nichols, E. S., and Page, S. W., Jr.: Dicumarol therapy in acute coronary thrombosis; results in 50 attacks; with review of data on embolic complications and immediate mortality in myocardial infarction. *J.Florida M.A.*, xxxii:365-370 (January) 1946.

14. Ogura, J. H.; Fetter, N. R.; Blankenhorn, M. A.; and Glueck, H. I.: Changes in blood coagulation following coronary thrombosis measured by heparin retarded clotting test (Vaugh and Ruddick test). *J.Clin.Investigation*, xxv:586-596 (July) 1946.

15. Parker, R. L., and Barker, N. W.: Effect of anticoagulants on incidence of thrombo-embolic complications in acute myocardial infarction. *Proc.Staff Meet., Mayo Clin.*, xxiii:367-378 (August 4) 1948.

16. Peters, H. R.; Guyther, J. R.; and Brambel, C. E.: Dicumarol in acute coronary thrombosis. *J.A.M.A.*, cxxx:398-403 (February 16) 1946.

17. Quick, A. J.; Stanley-Brown, M.; and Bancroft, F. W.: Study of coagulation defect in hemophilia and in jaundice. *Am. J.M.Sc.*, cxc:501-511 (October) 1935.

18. Shapiro, Shepard; Sherwin, B.; Redish, M.; and Campbell, H. A.: Prothrombin estimation; procedure and clinical interpretation. *Proc.Soc.Exper. Biol. & Med.*, l:85-89 (May) 1942.

19. Solandt, D. Y., and Best, C. H.: Heparin and coronary thrombosis in experimental animals. *Lancet*, ii:130-132 (July 16) 1938.

20. Wartman, W. B.: Occlusion of coronary arteries by hemorrhage into their walls. *Am.Heart J.*, xv:459-470 (April) 1938.

21. Wright, I. S.: Use of anticoagulants in treatment of diseases of heart and blood vessels; treatment and prophylaxis of thrombophlebitis and pulmonary embolism. *Ann.Int.Med.*, xxx: 80-91 (January) 1949.

22. Wright, I. S.; Marple, C. D.; and Beck, D. F.: Report of committee for evaluation of anticoagulants in treatment of coronary thrombosis with myocardial infarction; (a progress report on the statistical analysis of the first 800 cases studied by this committee). *Am.Heart J.*, xxxvi:801-815 (December) 1948.

23. Wright, I. S.: Experiences with dicumarol (3,3 methylenebis-[4-hydroxy-coumarin]) in treatment of coronary thrombosis with myocardial infarction; preliminary report. *Am.Heart J.*, xxxii:20-31 (July) 1946.

SYMPOSIUM ON STRABISMUS

S. U. I. School of Medicine

The department of ophthalmology of the State University of Iowa School of Medicine is holding a "Symposium on Strabismus" during the week of May 22, 1949. In addition to the regular staff of the department, the following guest lecturers will participate:

Walter B. Lancaster, M.D., Boston, Mass.
Francis H. Adler, M.D., Philadelphia, Pa.
George P. Guibor, M.D., Chicago, Ill.
Walter H. Fink, M.D., Minneapolis, Minn.
Kenneth C. Swan, M.D., Portland, Ore.
Frank D. Costenbader, M.D., Washington, D. C.

Richard G. Scobee, M.D., St. Louis, Mo.
Harold W. Brown, M.D., New York City.
Hermann W. Burian, M.D., Boston, Mass.

More detailed information concerning the course may be obtained from Dr. John T. McClintock, in care of the Dean's Office, School of Medicine, State University of Iowa, or Dr. James H. Allen, of the department of ophthalmology.

CONGENITAL MALFORMATIONS OF THE HEART AND GREAT VESSELS: DIAGNOSIS AND TREATMENT

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During the last 10 years, the efforts of the earlier investigators in the field of cardiovascular surgery have been crowned by successful corrective and curative procedures in the application of their ideas and principles in the human. The renewed interest and much of the enormous progress, we owe to the work of Maude Abbott, who clarified the rather complex field of the congenital cardiovascular anomalies in her attempt to correlate the pathologic, physiologic and clinical findings. Her publications and her Atlas¹ comprise the autopsy findings in 1,000 cases of congenital heart disease. Many anomalies of the great vessels can now be dealt with surgically, resulting in anatomic and clinical cures. However, the surgical intervention in cases of anomalies within the heart proper is still limited to a few types of defects, and the results obtained at present are palliative and directed to give symptomatic improvement only, without restoration of the normal anatomy and physiologic function.

No attempt will be made in this paper to discuss cardiac defects resulting from injuries, infections or degenerative processes. Only the congenital defects which have been successfully treated surgically, or the treatment of which may be forthcoming in the near future, and others in which the experimental approaches have been promising will be mentioned.

Patent Ductus Arteriosus

The ductus arteriosus is a structure necessary for the normal function of the fetal circulation. It transmits blood from the pulmonary arterial system to the aorta and shunts the largest part of the blood around the nonaerated and nonfunctioning lungs of the fetus. The classic experiments by Barclay, Barcroft, Barron and Franklin² on the fetal circulation in lambs, using arteriography, demonstrated that the ductus arteriosus carries mostly desaturated blood coming from the superior vena cava to the descending aorta, while the foramen ovale serves as shunt from the right auricle to the left side of the heart for oxygenated blood coming from the mother's placenta. They also found that the patent ductus arteriosus closes within five minutes after delivery. Kennedy²² has shown experimentally in guinea pigs that there are two phases of closure of the ductus

arteriosus. The first phase is caused by the contraction of the smooth muscle of the ductus and takes place within a few minutes. The second phase is completed in about one month and consists of replacement of the muscular tissue by scar tissue. The author also has found that certain stimuli, some of which were directly applied to the ductus, brought about contracture of the smooth muscle and closure of the structure. He found that vigorous respiration, and particularly breathing of oxygen, did bring about immediate and permanent closure of the ductus. Cristie¹⁴ examined the ductus arteriosus in 500 consecutive autopsies of newborns and infants and found that there was a rapid and uniform closure of the ductus up to about eight weeks after birth, at which time 88 per cent had closed permanently. At the end of 52 weeks, 1.2 per cent were found to be still patent. Abbott¹ found, in 1,000 cases of congenital heart disease of all age groups, 242 cases of patent ducti, of which 150 were unassociated with other congenital cardiovascular defects. It is estimated that there are at the present time about 20,000 persons in the United States with this vascular anomaly.

Physiologic investigations by Eppinger, Burwell and Gross,¹⁵ applying a modification of the Fick principle for cardiac output determination, demonstrated that the blood flow through a persistent ductus is from the aorta to the pulmonary artery along a decreasing pressure gradient, which results in recirculation of a considerable amount of shunted blood through the left auricle and ventricle. They estimated that 45 to 75 per cent of all the blood pumped into the aorta by the left ventricle is recirculated by way of the patent ductus. This causes an unequal cardiac output of the right and left ventricles, the left ventricle expelling two to four times the amount of blood expelled by the right.

Many writers agree^{28,29} that the life expectancy of a person with a patent ductus arteriosus is greatly reduced. It is estimated that the average duration of life is between 30 and 40 years. About 25 to 30 per cent of patients develop bacterial endarteritis and about 50 per cent have as the primary cause of death acute or chronic cardiac failure. If one takes the above statements into consideration, and the fact that the only hope for permanent cure is the surgical separation of the greater and lesser circulation, it is obvious that this should be advised in nearly every case. In an adolescent or adult patient the cardiac decompensation resulting from a patent ductus is rapidly progressive, and, usually, they are not cardiac cripples until the final episode of failure. The

surgical intervention in adults is much more complicated and is accompanied with greater risks, because the arteriosclerotic changes occurring in the ductus make it very friable. Also, the length and size of the ducti change, becoming shorter and wider with advancing age.

Two types of persistent patent ducti are seen. In the first type, the ductus may persist as the only vascular anomaly and is uncomplicated by other congenital cardiac defects. In the second type, the persistent ductus arteriosus is only a part of other often extensive congenital cardiovascular anomalies. In the latter instance, it frequently functions as a compensatory shunt necessary to maintain life. These cases often show constant cyanosis, clubbing of fingers and other signs not seen in uncomplicated cases of patent ducti. It is noteworthy that in Maude Abbott's collected cases about one-third fell into the latter group. Obviously, ligation of the ductus in this group should never be carried out.

Anatomically, three different types of ducti have been described: (1) the cylindric type where the ductus is of equal diameter throughout its entire length, (2) the funnel type where the ductus has the wide part of the funnel toward the aortic opening, and (3) the window type in which there is actually no length to the structure, but it is represented by a fistulous opening between the aorta and the pulmonary artery.

The diagnosis of patent ductus arteriosus is often made accidentally during routine physical examinations, and, not infrequently, the parents of a child have noted the marked precordial thrill. The incidence in female patients is about three times that of males. Many patients show no general physical findings unrelated to the heart, but some do show growth retardation. This is due to the fairly large amount of blood shunted away from the general systemic circulation. The child frequently fatigues easily and is unable to keep up with other children of the same age group. Palpitation is commonly observed, but cyanosis in the uncomplicated case is never seen unless there is impending cardiac failure with reversal of flow of blood through the ductus and admixture of unsaturated blood from the pulmonary artery to the systemic circulation in the aorta. These episodes of cyanosis are transient and undoubtedly depend in part on the configuration and size of the ductus.

The most outstanding sign is the "machinery murmur," most prominent in the pulmonary area over the second left intercostal space in the parasternal line. A definite thrill can be palpated in many instances. The murmur is continuous throughout the entire cycle, increasing during sys-

tole and decreasing during diastole. Many authors feel that the continuity of the murmur is pathognomonic, but recently some publications have appeared stating that atypical murmurs which can be heard only during systole are encountered in some instances. In very young patients, in those with large defects, and in some cases of patent ducti during cardiac failure atypical sounds are occasionally heard. The size of the heart depends on the additional load carried by it, and this is directly proportional to the amount of blood shunted back into the left side of the heart. Usually the heart is not enlarged, but left as well as late right cardiac enlargement to great size has been observed. The peripheral vascular findings show a high pulse pressure with a normal systolic level and a low diastolic level. The level of the diastolic blood pressure again depends on the amount of blood lost from the systemic to the pulmonary circulation. The greater the amount of blood shunted, the lower the diastolic pressure will be and the greater the pulse pressure. During or shortly after exercise, the diastolic pressure may be reduced to zero or extremely low levels. Peripheral capillary pulsations, peripheral Corrigan type of pulse, and pistol shot sounds in the femoral vessels can be demonstrated. The contour of the heart, as seen on the anterior-posterior roentgenogram or during fluoroscopy, frequently shows an increase of the pulmonary arterial shadow to the left of the sternum, due to dilation of the pulmonary artery and pulmonary conus of the right ventricle. The pulmonary vascular markings are prominent and pulmonary congestion can be seen. In cases of patent ducti with large luminal pulsations in the region of the lung hila are present, giving a typical, but not diagnostic, "hilar dance." Electrocardiograms are essentially normal with occasional left or right axis deviations.

Shapiro²⁸ stressed 10 diagnostic criteria which are commonly present, and, if all are found, the diagnosis of a persistent patent ductus arteriosus is nearly a certainty. In summary, they are: (1) machinery murmur, (2) thrill in the pulmonary area, (3) enlarged pulmonary artery, (4) enlarged and pulsating pulmonary vessels, (5) enlarged heart, (6) increased pulse pressure, (7) stunting of growth, (8) absence of cyanosis and clubbing of fingers, (9) normal electrocardiogram, and (10) history of heart disease from early childhood.

In the differential diagnosis of a patent ductus, the following conditions must be considered. In very young patients a venous hum may be present, which is not as prominent as the machinery murmur described above. The venous murmur can be obliterated by changing the position of

the head of the child, or by compression of the large neck vessels. Interauricular septal defects may show roentgenographic findings similar to those found in the patent ductus patients, but the cardiac size is usually much larger. The murmur is systolic in time only. The pulse pressure is within normal limits, and there are no peripheral signs of aortic insufficiency. Interventricular septal defects give a murmur systolic in time only. It is heard over a location different from the one of a patent ductus arteriosus, which is always over the pulmonary area. Roentgenograms show right ventricular enlargement and enlargement of the pulmonary conus.

The first suggestion to close a patent ductus arteriosus surgically was made by Munro²³ in 1907. The first successful closure was performed by Gross and Hubbard¹⁷ in 1938. Touroff and Vesell³⁰ in 1940 reported the first successful closure of a patent ductus complicated by bacterial endarteritis resulting in complete recovery. Previous attempts by others had met with failure. The literature at present contains many summaries of cases treated successfully, and the mortality in the patients with uncomplicated ducti is well below 5 per cent, while the ones complicated by bacterial endarteritis is around 10 per cent. The technic of closure of the patent ductus has undergone many changes. There exists some difference of opinion among surgeons as to ligation or modified ligation in continuity alone, versus ligation and division of the structure. Simple ligation in continuity has led to recanalization of the ductus in about 10 per cent of the cases. Obliterating the ductus over a longer distance, using several ligatures and umbilical tape, wrapping cellophane around the ductus to cause later scarring and other methods, have reduced the number of recurrences. Gross¹⁸ has strongly advocated ligation and complete division. Special instruments to make this possible and safe in cases with short wide ducti have been developed. Still, there are many surgeons who feel that the low percentage of recanalization in cases in which ligation in continuity alone had been performed outweighs the increased risk of hemorrhage after division.

The indications for surgical closure of a patent ductus have been summarized well in Taussig's book.²⁹ The most urgent reason for the operative procedure is cardiac failure, and it is often dramatically improved, even though the cardiac enlargement may not recede after obliteration of the shunt. The development of subacute bacterial endarteritis is a clear-cut indication, as has been demonstrated by Touroff and Vesell,³⁰ and in many instances since then. The operative proce-

dures give the patient an excellent chance for complete recovery. Stunting of growth, great cardiac enlargement, very low diastolic pressures, and the existence of an intracardiac left to right shunt, as found in interauricular and interventricular septal defects associated with a patent ductus, are other indications.

The chances that a persistent patent ductus will close spontaneously after 2 or 3 years of age are very slight. The general feeling among surgeons at present is that all patent ducti beyond this age group should be ligated prophylactically while the patients are still in their childhood or adolescence. Absolute contraindications to surgical closure are present in cases which show persistent cyanosis and clubbing of fingers, which obviously have other associated cardiovascular anomalies with a venous-arterial shunt, and which show evidence of insufficient blood flow to the lungs due to pulmonary stenosis. The patent ductus in these cases has a necessary compensatory function. Also, in early infancy it is permissible to wait until the patient has reached an age at which surgery within the thorax is better tolerated.

Coarctation of the Aorta

Two groups of this vascular anomaly have been described.^{20, 29} The first is the infantile type in which the narrowing or atresia involves nearly the entire fetal isthmus of the aorta between the left subclavian artery and the region where the ductus arteriosus enters the descending aorta. If this atresia is severe, the symptoms appear early, often immediately after birth. The ductus arteriosus usually is large and persists carrying desaturated blood from the pulmonary artery to the lower extremities. Frequently, this type of coarctation is associated with other congenital cardiac anomalies and results in the early death of the patient. Occasional instances are seen where the narrowing of the aortic isthmus is only moderate and where the patent ductus obliterates slowly, giving adequate time for development of a sufficient collateral circulation and survival of the patient beyond infancy. All these patients have an hypoplastic descending aorta.

The second type, the adult type, comprises much the larger group. The varying degrees of narrowing or complete occlusion of the aorta involve only a rather short segment of the descending aorta in the region of the ductus arteriosus or ligamentum arteriosum. In Maude Abbott's series, 142 cases of coarctation can be found in 1,000 cases of congenital cardiovascular anomalies, 105 being classified as the adult type. The incidence estimated in the general population varies.

Most statistics place it around 1 case per 8,000 to 10,000 of the population. Males predominate over females four to five times. The symptoms are minimal during the early period of life, and many male patients have a healthy, well formed, often precociously developed physique, while in female patients normal physical development appears to be rare. They show underdevelopment, short stature and marked evidence of ovarian hypofunction.

The symptoms in cases of coarctation are due to the collateral circulation and the severe hypertension in the vascular channels arising proximal to the area of the aortic obstruction. The collateral circulation develops and increases during the growth of the patient. Three main channels are responsible for the collateral circulation, consisting of the superior intercostal arteries with the first aortic intercostal vessels, the internal mammary with the epigastric vessels, and the transverse cervical, transverse scapular and the subscapular arteries, forming a rich network around the shoulder and scapula. These collateral channels produce murmurs and pulsations in areas where they become superficial as, for example, in the interscapular regions.

Many cases of coarctation of the aorta are not diagnosed as long as the symptoms are minimal and the hypertension is asymptomatic and well tolerated. Even mild hypertension in a young individual should prompt careful search for signs of coarctation. Cardiac symptoms, headaches and throbbing sensations in the head are often the first complaints. Occasionally, patients will develop intracranial signs due to cerebral hemorrhage before the condition is recognized and diagnosed. The speculation over why patients develop the marked hypertension and over the difference in blood pressure levels in the upper and lower parts of the body is of interest. Many feel that it is due to the reduced renal blood flow with resulting hypertension, and others think that the reduced size of the vascular bed above the coarctation is sufficient reason. The diastolic pressure above and below the coarcted area is elevated, but of about the same level, adding to the evidence that there is a generalized peripheral arteriolar resistance. The systolic blood pressure in the upper extremities may be of an extremely high level, while it is imperceptible in the lower extremities. The same is true of the pulses in the arms and legs. The lower extremities are cooler than the upper part of the body.

The size of the heart is within normal limits, but some show left ventricular hypertrophy and left axis deviation on the electrocardiogram. The heart seems to adjust itself early to the increased

load caused by the hypertension, and progressive cardiac enlargement has not been observed. In roentgenograms of the heart and chest the absence of the aortic knob is visible, with evidence of dilation of the ascending part of the aorta. Erosion of the inferior border of some of the ribs posteriorly is an extremely valuable sign and is caused by the marked collateral circulation and pulsation of those vascular channels. This notching of the ribs is absent in patients of the younger age group, but present in the adolescent and adult patient.

The prognosis in untreated cases of coarctation is unfavorable, even though long survivals have been reported. The average life expectancy is around 30 years of age. About one quarter of the patients will develop bacterial endarteritis and aortitis; another quarter will succumb to rupture of the aorta in the region of the coarctation; and about 30 per cent of all patients will die, due to the hypertensive state, with congestive heart failure or intracranial hemorrhage.

The experimental approach of surgery upon the aorta dates back about 40 years, but, only as recently as 1944, Blalock and Park⁴ suggested that the coarcted area could be by-passed by anastomosing the left subclavian or carotid artery to the aorta distal to the constricted zone. This had been done experimentally on animals but had not been applied to humans. Crafoord and Nylin¹³ reported two cases operated upon during October 1944, and in those two instances the aorta had been clamped above and below the coarctation, which was then excised and an end-to-end anastomosis performed. This was followed shortly by the reports of Gross and Hufnagel¹⁹ of two more cases treated in the same manner. The occlusion and excision of the coarcted aortic segment is well tolerated, because a large collateral circulation is present in the cases of the adult type of coarctation that is not disturbed during the surgical repair. Since the successful early cases, many have been reported. Undoubtedly, the direct end-to-end anastomosis of the aorta is the procedure of choice, but, occasionally, cases may be encountered where the by-passing around the narrowed area by way of a subclavian-aortic anastomosis is the only surgical possibility.

The importance of early diagnosis and surgical treatment of this condition cannot be over-emphasized. The complications due to the hypertensive state are the primary cause of death in most patients, and the accompanying arteriosclerotic changes in the vascular bed, affected by the marked hypertension, develop rapidly and are pronounced even in the fairly young age group. The

aorta before the age of 6 to 8 years is small, and the arteriosclerotic changes at the age of 25 years may be quite pronounced, making excision and suture quite difficult. The optimum time for surgical intervention falls between these two age groups.

The results after successful anastomosis are remarkable. There is progressive reduction of the hypertension and immediate relief of all hypertensive symptoms. The circulation to the lower portions of the body is dramatically improved with the appearance of palpable pulses and normal blood pressure values in the lower extremities.

Anomalies of the Aortic Arch

During the embryologic formation of the aortic arch system and the great vessels arising from it, many possibilities for anomalous developments exist. The most complete study of this phase of vascular development has been made by Congdon,¹¹ and recently it has been well summarized from the surgical point of view by Gross and Ware.²⁰ There are actually only two anomalies falling into this group which are amenable to surgical relief. They are partially obliterated or completely patent double aortic arch and anomalous subclavian arteries arising from either an abnormal right or normally developed left aortic arch. Many of the anomalies do not give rise to symptoms and they are found repeatedly on routine postmortem examinations or cadaver dissections. It has been estimated that the incidence of anomalous right or left subclavian vessels alone is about 4 to 8 per 1,000 of the general population. If symptoms are present, they are due to compression of either the trachea and esophagus, as in the case of a double aortic arch, or of compression of the esophagus alone, as in anomalous subclavian arteries. Moderate to severe respiratory stridor and dysphagia are the most prominent symptoms noted early in infancy. During feeding, or while the infant is crying, marked inspiratory retraction of the soft parts of the chest, coughing and cyanosis are common. Repeated episodes of pulmonary infections due to tracheal compression and stenosis are not infrequent. The diagnosis can be made by the rather typical clinical picture, by esophagrams showing abnormal compression of the esophagus, tracheograms showing compression, and by endoscopy of the esophagus and trachea.

The surgical treatment consists of identification and division of the offending abnormal vessel causing the compression. In the case of an abnormal subclavian artery, simple division will suffice. The division of one of the limbs of a

double aortic arch does need careful evaluation and the division of the limb that carries the smaller amount of blood, with preservation of flow of blood to the main arterial channels going to the head and upper extremities. Division and resection of the offending vessel gives immediate striking relaxation of the constricted, encircled or compressed structures, and this is followed by permanent clinical relief of the symptoms.

Pulmonary Stenosis or Atresia

Patients having this congenital anomaly can be divided into many groups, but they all have certain basic defects in common. All show moderate to severe cyanosis, which is certainly the most outstanding symptom. The cyanosis is due to two factors: first, to an inadequate pulmonary blood flow caused by the stenosis or atresia of the pulmonary artery, and, secondly, to the addition of nonoxygenated blood to fully saturated blood by way of a shunt from the right to the left side of the heart. The resulting desaturation causes a compensatory polycythemia and peripheral capillary changes, which contribute further to the cyanosis. The most commonly encountered defect is the so-called tetralogy of Fallot. It is characterized by stenosis of the pulmonary artery, also involving the pulmonary conus of the right ventricle, overriding of the aortic orifice over both right and left ventricles (dextroposition), an interventricular septal defect, and right cardiac hypertrophy. The severity of the cyanosis in this syndrome depends on the amount of the pulmonary arterial flow, which is reduced proportionately to the degree of stenosis of the pulmonary artery, and on the degree of overriding of the aortic orifice, resulting in varied amounts of mixture of mixed venous blood with the systemic aortic content. One can readily see how greatly all these factors can vary, producing all gradations of mild to extremely severe clinical pictures. If the pulmonary blood flow is small or absent, it is incompatible with life unless the patients have a patent ductus arteriosus and the blood is shunted from the aorta through the ductus into the pulmonary arterial system. Blalock and Taussig⁵ had noticed that infants falling into this category die if the patent ductus closes, and if no adequate collateral circulation had been established at the time of closure. This and other experimental facts previously observed brought about the idea of producing a shunt between a systemic artery and the pulmonary artery distal to the stenosis.

During fetal life this malformation does not change the usual circulation of the blood through the heart to a great degree or increase the load upon either side of the heart. At birth the heart

is of normal size. If the patent ductus takes over as the main shunt from the aorta to the pulmonary artery, its closure can be greatly delayed. During and after closure of the ductus, the circulation which remains for future life becomes established, and the clinical findings develop which are so characteristic of this type of malformation. Visible cyanosis may or may not be present during the first few weeks of life, but it may appear when the infant strains or cries. The cyanosis varies with the amount of total hemoglobin and reduced hemoglobin in the circulation. Clubbing of the fingers and toes results from the low oxygen saturation of the arterial blood. Compensatory polycythemia and high hematocrit readings are constant findings. The oxygen-carrying capacity is markedly increased, but the actual oxygen saturation of the arterial systemic blood is extremely low. Values of 60 to 70 per cent saturation at rest are not uncommon. This low saturation further decreases on exercise, in part due to an increased venous-arterial shunt, as shown by Bing, Vandam and Gray,³ and in part to the increased desaturation of the arterial blood in the periphery. Dyspnea is always present during exercise and in infants may occur in paroxysmal attacks. The constantly desaturated state of the blood and the resulting decreased supply of oxygen to the tissues produces underdevelopment. A peculiar finding in these cyanotic patients is the squatting position which they at times assume during periods of recovery after exercise. It seems that they are more comfortable in a position having the lower extremities drawn up against their body.

The physical examination of the heart reveals cardiac murmurs and thrills which are systolic in time. Sometimes the murmurs are not prominent, especially if the pulmonary stenosis is extreme. Roentgenograms show no cardiac enlargement in infants. After sufficient stress has been placed upon the right heart during the growth of the patient, right ventricular hypertrophy develops. The right ventricular hypertrophy results from the increased amount of blood which is returned to the right auricle and ventricle. All the blood leaving the left ventricle and part of the blood of the right ventricle is pumped into the systemic circulation and returned to the right side of the heart. Furthermore, an additional load is placed upon the right ventricle, which has to pump blood into a stenosed pulmonary artery and into the greater circulation, where peripheral resistance is high compared to the normal pulmonary bed. The right cardiac hypertrophy causes rounding of the apex of the heart and lifting of the apex of the heart off the diaphragm. The

pulmonary conus is not visible, and these two facts account for the so-called "boot-shaped" heart in the roentgenograms. Fluoroscopy of the region of the hilum shows a prominent "aortic window," due to the reduced size of the pulmonary arteries and the absence of pulsations of the pulmonary vessels. Electrocardiograms show a right axis deviation.

The average life expectancy in this group of patients is about 13 years, and all during their lives they present a considerable problem to their parents. Cerebral thrombosis is a common occurrence, caused by the polycythemia and increased viscosity of the blood. Bacterial endocarditis and pulmonary disease are also frequent complications.

In the differential diagnosis, one has to eliminate all the other defects which cause cyanosis, but which have no diminished pulmonary blood flow. Only those cases in which the pulmonary blood flow was decreased before operation receive benefit from a surgical anastomosis between a systemic artery and the pulmonary artery. The majority of cyanotic patients living beyond infancy belong to the group of the tetralogy of Fallot, leaving only a relatively small percentage of cases with other types of defects.

Eisenmenger's Syndrome—It is identical with the tetralogy of Fallot except that the pulmonary stenosis does not exist. There is less admixture of venous blood through a right to left shunt. The pulmonary blood flow is normal through normal sized and at times dilated pulmonary vessels. The cyanosis in these patients occurs later in life and is not as severe. The patients are less incapacitated and their activities less restricted.

Complete Transposition of the Great Vessels—To have life maintained for any length of time, an additional intracardiac defect must be present to permit shunting of blood from one side of the heart to the other. If a pure complete transposition exists, the infants do not survive. The heart size becomes extreme, which is in contradistinction to the heart seen in tetralogy of Fallot. Cyanosis, polycythemia, clubbing of fingers, growth disturbances, dyspnea and cardiac murmurs are present. The survival and severity of symptoms depend on the amount of blood shunted through the intracardiac septal defect between the otherwise completely separated greater and lesser circulations and transposed aorta and pulmonary artery. Hanlon and Blalock²¹ recently have demonstrated experimentally that an anastomosis of the right pulmonary vein either to the right auricle or to the superior vena cava is possible. This type of anastomosis produces a shunt of oxygenated blood coming from the lesser circulation into the greater circulation, which has

its origin from the right side of the heart in this type of patient. Blalock and Hanlon⁶ approached the same problem in another way, by producing large interauricular defects, permitting increased mixing of saturated and desaturated blood. Direct visualization of the operative site and complete control of hemorrhage without interruption of the circulation during performance of the operative procedure are special advantages of their technic.

Tricuspid Atresia—This is usually associated with hypoplasia of the right ventricle, left sided cardiac enlargement, systolic murmur, polycythemia and cyanosis. This defect recently has also been improved by performing a systemic arterial to pulmonary artery anastomosis. The differential diagnostic points in this type are the left axis deviation on the electrocardiogram and the left cardiac hypertrophy. In all other respects, the clinical picture is similar to the cases of tetralogy of Fallot.

Truncus Arteriosus—This lesion is rarely seen beyond infancy. It consists of a single vessel arising and overriding both the right and left ventricles. The degree of cyanosis depends on the anatomic arrangement through which the pulmonary blood flow is maintained. If the pulmonary artery arises from the truncus arteriosus, the blood flow to the lungs may be satisfactory and the symptoms and cyanosis moderate. If the pulmonary flow is maintained through the bronchial vessels alone, the cyanosis is intense. The cardiac enlargement is extreme, involving both ventricles. The aortic knob is prominent, and esophograms may show great displacement of the esophagus by the large aortic truncus. Loud systolic murmurs and thrills are present. No surgical treatment is known to improve this condition.

Pure Pulmonary Stenosis—This is a rare anomaly which consists in stenosis of the pulmonary valves or pulmonary conus of the right ventricle. Brock⁷ recently attacked this problem by cardioscopy, cutting the stenosed pulmonary valves with a cardiotome, which he introduced through the right ventricle. He reported marked improvement of the patients. Brock felt that this procedure may be of value in some of the cases of so-called tetralogy of Fallot if the obstruction of the pulmonary flow is due only to a stenosis involving the pulmonary valves. This seems to be true in a higher percentage of cases than was recognized previously.

Defects of the Cardiac Septum—The defects may be of various sizes and may involve the interauricular or the interventricular septum or both. Interauricular septal defects are usually well tol-

erated until the terminal state of cardiac failure, at which time intermittent cyanosis does appear. Anatomically, one finds the different sized interauricular defects, marked dilation of the right auricle and ventricle, and enlargement of the pulmonary artery. The pulmonary blood flow is greatly increased, due to the left to right interauricular shunt. The left ventricle is small, and the amount of blood ejected from the left ventricle into the aorta is greatly reduced. Interventricular septal defects produce cyanosis in some patients, and it may be pronounced if there exists an additional pulmonary stenosis and a resulting right to left shunt between the ventricular systems. Uncomplicated small interventricular defects are quite well tolerated and relatively asymptomatic. Recently Cohn¹⁰ closed experimentally produced interauricular defects by invaginating some of the wall of the right auricle and suturing it to the defect. He then detached the invaginated portion of the auricular wall by an ingenious technic. Murray²⁴ closed interauricular defects by passing silk sutures across the defects. He used living fascial sutures for the closure of interventricular defects. Four cases reported showed improvement and marked reduction in the size of the hearts.

The surgical treatment of pulmonary stenosis is certainly one of the outstanding milestones in cardiac surgery. Blalock and Taussig⁵ and Potts²⁵ are those responsible for the development of the operative procedures which are used at the present time. The basic principles are the same in all of the different operative technics advised. They all must increase the amount of blood flowing through the lungs by way of the pulmonary arteries. Blalock⁵ developed a technic using the subclavian, carotid or innominate arteries. He anastomosed the most suitable one, end-to-side, to the pulmonary artery. At first, the subclavian vessels were used on the same side on which the aortic arch was located. Many surgeons still prefer to use the subclavian artery on the aortic arch side, because the anastomosis is easier to perform and less dissection is needed. Blalock later advised using the subclavian or innominate arteries on the opposite side of the aortic arch for the anastomosis. The reason for this was a technical one. The angle of the vessels after completion of the anastomosis on the antiaortic side was found to be a more opportune one, and no kinking of the vessels occurred. In some instances, if the pulmonary arteries are small, or in young children, an end-to-end anastomosis between the systemic arterial vessel and the distal part of the pulmonary artery must be performed.

It is of greatest importance to know preoperatively on which side the aortic arch is located. In about 20 per cent of the cases of tetralogy of Fallot, the aortic arch is on the right side. This can be determined with great accuracy by the use of roentgenograms of the chest and esophograms.

Potts, Smith and Gibson²⁵ developed a technic using a specially designed clamp which permits side-to-side anastomosis between the descending aorta and pulmonary artery. The advantage of this type of anastomosis is that the diameter of the aorta-pulmonary artery shunt can be of any desired size. The technic can also be applied to much younger patients than the one of Blalock. Also, the large systemic vessels leading to the neck and upper extremities are left undisturbed. In general, it is the feeling that the optimum time for the operative procedures is after the age of 2 years. If at all possible, patients should be carried past this age limit. Occasionally, in extremely cyanotic children, surgical intervention may become necessary as a life-saving measure before this age has been reached.

Following a surgical procedure which increases the pulmonary blood flow, the cyanosis disappears and with it the compensatory polycythemia. The systemic arterial oxygen saturation is improved, permitting increased activity and exercise tolerance. Even though the surgical interventions do not cure this type of congenital cardiac defect, the symptomatic improvement is great. At present, nothing can be stated as to the question of prolonging the life expectancy of these patients. Most certainly, the type of life these children were compelled to lead before the corrective procedures were possible, compared with the type of life afterward, leaves no doubt as to the great improvement which can be offered these unfortunate patients.

The ever increasing need to make the anatomic and physiologic diagnosis in congenital heart disease more accurate has stimulated the development of two diagnostic technics which must be mentioned briefly. They are cardiac catheterization and angiocardiology.

Forssmann¹⁶ in 1931 was the first to pass a cardiac catheter, in a self experiment, into the right side of the heart. At the same time, he attempted visualization of the different cardiac chambers by single exposure roentgen technic. He injected radiopaque solutions through the catheter into the heart. The method of cardiac catheterization was developed with great accuracy and was used extensively by Cournand and Ranges,¹² who were mostly interested in cardiac

output determinations. Many workers thereafter used this method, and Bing *et al*³ employed it extensively to determine pressures and to withdraw blood for oxygen saturation studies in congenital heart disease of all types. This combined with other clinical methods furthered the accuracy of the anatomic and physiologic investigations, and evaluations of operative benefits could be obtained.

Angiocardiology and arteriography have made even more accurate anatomic diagnosis possible, and these procedures are now carried out in many large institutions which have to deal with surgery of congenital heart disease. After Forssmann's first attempt at visualization of the cardiac chambers, many workers perfected the technic. Among them were Robb and Steinberg^{26, 27} in this country, who have reported on nearly all types of congenital and acquired cardiac and large vessel defects and anomalies. Recently two papers were published dealing with intravenous angiocardiology and retrograde arterial aortography. Carson, Burford, Scott and Goodfriend⁹ described the technic of intravenous angiocardiology in cases of congenital cyanotic heart disease, and the differential and anatomic diagnosis on the basis of the angiocardiology. Burford and Carson⁸ discussed the method of retrograde arterial aortography and arteriography, with emphasis on cases with coarctation of the aorta.

The outlining of the cardiac chambers and the great vessels in serial roentgen exposures makes it possible to visualize accurately all congenital defects from an anatomic point of view, and one can determine with certainty if the defects present can be improved by surgical intervention.

Summary

An attempt has been made in this paper to summarize some of the important points in the field of congenital heart lesions which can be approached and improved by surgical means. Surgical intervention in the acyanotic group can often correct the defects and restore normal anatomic and physiologic conditions, while in the cyanotic group palliative surgical measures for some of the patients are now available. Emphasis has been placed on the poor prognosis of some of the untreated patients with these lesions. The incidence and types of complications have been enumerated. An early accurate anatomic and physiologic diagnosis should be made on all congenital heart or great vessel lesions, having in mind that surgical intervention is the only effective treatment available at the present time. The teamwork of general practitioners, pediatricians,

roentgenologists, physiologists and surgeons is necessary to give patients with congenital heart disease the best chance for a more comfortable life or permanent relief from their disease.

BIBLIOGRAPHY

1. Abbott, M. E.: Atlas of congenital cardiac disease. Am. Heart Assoc., New York, 1936.
2. Barclay, A. E.; Barcroft, J.; Barron, D. H.; and Franklin, K. J.: Radiographic demonstration of circulation through heart in adult and in foetus, and identification of ductus arteriosus. *Brit.J.Radiol.*, xii:505-517 (September) 1939.
3. a. Bing, R. J.; Vandam, L. D.; and Gray, F. D., Jr.: Physiologic studies in congenital heart disease: II results in pre-operative studies in patients with tetralogy of Fallot. *Bull.Johns Hopkins Hosp.*, lxxx:121-141 (February) 1947.
- b. Bing, R. J.; Vandam, L. D.; and Gray, F. D., Jr.: Physiological studies in congenital heart disease: III results obtained in five cases of Eisenmenger's complex. *Bull. Johns Hopkins Hosp.*, lxxx:323-347 (June) 1947.
4. Blalock, A., and Park, E. A.: Surgical treatment of experimental coarctation (atresia) of aorta. *Ann.Surg.*, cxix:445-456 (March) 1944.
5. Blalock, A., and Taussig, H. B.: Surgical treatment of malformations of heart in which there is pulmonary stenosis or pulmonary atresia. *J.A.M.A.*, cxxviii:189-202 (May 19) 1945.
6. Blalock, A., and Hanlon, C. R.: Intracardial septal defects; its experimental production under direct vision without interruption of circulation. *Surg.,Gynec.& Obst.*, lxxxvii:183-187 (August) 1948.
7. Brock, R. C.: Pulmonary valvulotomy for relief of congenital pulmonary stenosis; report of 3 cases. *Brit.M.J.*, i:1121-1126 (June 12) 1948.
8. Burford, T. H., and Carson, M. J.: Visualization of aorta and its branches by retroarterial diastatic injection. *J.Pediatr.*, xxxiii:675-687 (December) 1948.
9. Carson, M. J.; Burford, T. H.; Scott, W. G.; and Goodfriend, J.: Diagnosis of pulmonary stenosis by angiocardiography. *J.Pediatr.*, xxxiii:525-543 (November) 1948.
10. Cohn, R. (San Francisco): Experimental method for closure of intraauricular septal defects in dogs. *Am.Heart J.*, xxxiii:453-457 (April) 1947.
11. Congdon, E. D.: Transformation of aortic-arch system during development of human embryo. *Contrib.Embryol.* (Carnegie Inst.), Washington, xiv:65-71, 47-110, 1922.
12. Courmand, A., and Ranges, H. A.: Catheterization of right auricle in man. *Proc.Soc.Exper.Biol.&Med.*, xlv:462-466 (March) 1941.
13. Crafoord, C., and Nylin, G.: Congenital coarctation of aorta and its surgical treatment. *J.Thoracic Surg.*, xiv:347-361 (October) 1945.
14. Christie, A.: Normal closing time of foramen ovale and ductus arteriosus; anatomic and statistic study. *Am.J.Dis.Child.*, xl:323-326 (August) 1930.
15. Eppinger, E. C.; Burwell, C. S.; Gross, R. E.: Effects of patent ductus arteriosus on circulation. *J.Clin.Investigation*, xx:127-143 (March) 1941.
16. Forssmann, W.: Ueber Kontrastdarstellung der Höhlen des lebenden rechten Herzens und der Lungenschlagader. *München, med. Wehnschr.*, lxxviii:489-492 (March 20) 1931.
17. Gross, R. E., and Hubbard, J. P.: Surgical ligation of patent ductus arteriosus; report of first successful case. *J.A.M.A.*, cxii:729-731 (February 25) 1939.
18. Gross, R. E.: Complete surgical division of patent ductus arteriosus; report of 14 successful cases. *Surg.,Gynec.&Obst.*, lxxviii:36-43 (January) 1944.
19. Gross, R. E., and Hufnagel, C. A.: Coarctation of aorta: experimental studies regarding its surgical correction. *New England J.Med.*, cxxxiii:287-293 (September 6) 1945.
20. Gross, R. E., and Ware, P. F.: Surgical significance of aortic arch anomalies. *Surg.,Gynec.&Obst.*, lxxxiii:435-448 (October) 1946.
21. Hanlon, C. R., and Blalock, A.: Complete transposition of aorta and pulmonary artery; experimental observations on venous shunts as corrective procedures. *Ann.Surg.*, cxxvii:385-397 (March) 1948.
22. Kennedy, J. A.: New concept of cause of patency of ductus arteriosus. *Am.J.M.Sc.*, cciv:570-573 (October) 1942.
23. Munro, J. C.: Ligation of ductus arteriosus. *Ann.Surg.*, xlv:335-338 (September) 1907.
24. Murray, G.: Closure of defects of cardiac septa. *Ann. Surg.*, cxxviii:843 (October) 1948.
25. Potts, W. J.; Smith, S.; and Gibson, S.: Anastomosis of aorta to pulmonary artery; certain types of congenital heart disease. *J.A.M.A.*, cxxxii:627-631 (November 16) 1946.
26. Robb, G. P., and Steinberg, I.: Practical method of visualization of chambers of heart, pulmonary circulation, and great blood vessels in man. *J.Clin. Investigation*, xvii:507 (July) 1938.
27. Robb, G. P., and Steinberg, I.: Visualization of chambers of heart, pulmonary circulation, and great blood vessels in man; practical method. *Am.J.Roentgenol.*, xli:1-17 (January) 1939.
28. Shapiro, M. J.: Preoperative diagnosis of patent ductus arteriosus. *J.A.M.A.*, cxxvi:934-937 (December 9) 1944.
29. Taussig, H. B.: Congenital malformations of heart. *Commonwealth Fund*, New York, 1947.
30. Touroff, A. S. W., and Vesell, H.: Subacute streptococcus viridans endocarditis complicating patent ductus arteriosus; recovery following surgical treatment. *J.A.M.A.*, cxv:1270-1272 (October 12) 1940.

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CLINICOPATHOLOGIC
CONFERENCE

February 16, 1949

Summary of Clinical Record

A 22 year old white male patient entered the University Hospitals Oct. 21, 1949, complaining of pain in the shoulders, upper abdomen and right ankle. Chills and fever had also been noted.

He was first admitted on April 8, 1937, on the Pediatric Service. Two weeks prior to admission, he had noted pain, redness and swelling of the right ankle. This was followed by fever and migrating pains in the knees, ankles and hips. There had been no epistaxis nor upper respiratory infection. His temperature ranged from 102.6 F. upon admission to 99 F. at the time of discharge one month later. Blood pressure was 105/60. The physical examination was entirely negative except for a harsh localized systolic murmur at the apex, which diminished during expiration. The pulmonic second and mitral first sounds were not accentuated. These findings were unchanged after a month of supervised bed rest at home. He was readmitted on June 5, 1937, with partial nasal obstruction and swollen turbinates, and, after considerable debate, tonsillectomy and adenoidectomy were performed. Convalescence from this was uneventful, and he maintained partial bed rest for three years. The social worker had reported that the family was on relief and doubted that intelligent home care or adequate diet would be available for a projected convalescent period.

Until next seen on March 16, 1945, he remained well, engaging in strenuous sports and doing heavy work. Two weeks before March 16, 1945, an appendectomy was performed because of abdominal pain and fever. Penicillin was administered postoperatively, and when the fever did not subside, he was sent to this hospital. There were no particular complaints. Physical examination revealed a well nourished 18 year old boy, perspiring profusely, with an oral temperature of 102 F. Crusted blood was present on the nasal mucosa. The cardiac dullness extended from the right border of the sternum to the left anterior axillary line. A regular rhythm with a rate of 85 beats per minute was described. Palpation and auscultation revealed a systolic and diastolic thrill and murmur over the entire precordium.

The relative intensity of the heart sounds was not recorded. Blood pressure was 140/35. All accessible peripheral vessels, including the retinal arterioles, exhibited visible pulsations. A pistol shot sound could be heard over many peripheral vessels. Duroziez' sign was elicited in the femoral artery. There was marked tenderness over the appendectomy scar. The liver was not palpable. There was no edema.

Laboratory findings upon admission showed the urine to be free of albumin, sugar and blood. The specific gravity was 1.020. The blood showed 10 gm. of hemoglobin per 100 ml., 16,100 leukocytes and 3,600,000 erythrocytes per cu. mm. The erythrocyte sedimentation rate (Westergren uncorrected) was 125 mm. in an hour. Nine blood cultures were drawn between March 16 and April 12, 1945. On April 9 and April 17, *Staphylococcus aureus* with slight hemolysis was reported.

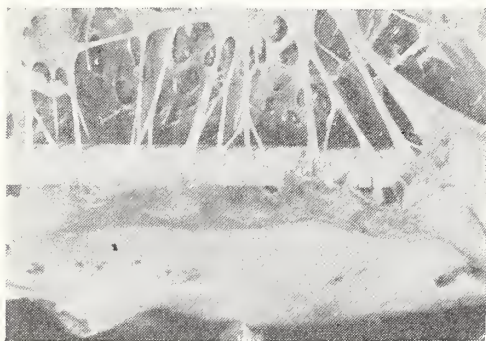


Fig. 1. Vegetations on Mitral Valve.

All other blood cultures were sterile. The Kolmer and Kline tests were negative and remained negative on each of his hospital admissions.

On March 18, 1945, pain occurred in the left side of the chest. The respiratory rate rose to 35 and the pulse rate to 100 per minute. The temperature varied between 102 F. and 104 F. Impaired resonance was present over the lower left lung field posteriorly, and the breath sounds were bronchial in quality over this area. On March 19 rales were heard in both lung bases. Fifty thousand units of penicillin were injected intramuscularly every eight hours. By March 21 an observer noted that upon deep inspiration the systolic blood pressure level dropped from 140 to 130 mm. Hg. A precordial friction sound and downward rotation of the liver were also described. Tubular breathing persisted over the left posterior lung field. Penicillin was discontinued on March 29. Therapy thereafter consisted of bed rest, sedation and intermittent administration of acetylsalicylic acid. An electrocardiogram taken March 17 at a heart rate of 85 revealed

a P-R interval of 0.20 sec. T waves were inverted in leads II and III on April 17, and in all standard leads on May 4. By June 12 the T wave in lead III was relatively isoelectric, with T waves in leads I and II again upright. These were the most significant electrocardiographic findings. There was gradual clinical improvement, and when discharged on June 18, 1945, the blood contained a hemoglobin of 11.5 gm., 3,900,000 erythrocytes and 10,000 leukocytes. The erythrocyte sedimentation rate (Westergren uncorrected) was 6 mm. in one hour. On Jan. 23, 1946, an out-clinic examination disclosed no new symptoms or findings.

The patient was readmitted on Dec. 24, 1946, complaining of sharp abdominal pains. An oral temperature of 102.8 F. was recorded. Flushing of the face was marked. The peripheral vascular findings were unchanged from the last admission. Heaving of the entire precordium occurred with each heart beat, and loud systolic and diastolic murmurs were widely distributed over the anterior chest. The maximal intensity of the diastolic murmur was at the sternal border on the right, and at the third interspace on the left. The heart rate was 70 per minute; rhythm was regular; and blood pressure, 150/40. The liver was barely palpable and slightly tender. The erythrocyte sedimentation rate was 112 mm. per hour, and there were 13,250 leukocytes per cu. mm. of blood. Albumin of 2 plus intensity, on a scale of 4, and a few erythrocytes were found in the urine. Five blood cultures were negative. The blood urea nitrogen measured 22.0 mg. and the creatinine 1.0 mg. per 100 ml. Among the significant electrocardiographic findings was a P-R interval of 0.36 sec., with a ventricular rate of 65 and a negativity of the T waves in the standard leads as well as in lead IV F. In a lateral esophagram the esophagus was shown to be displaced posteriorly in the region of the left auricle. Buffered aspirin, 1.2 gm. every four hours, was taken by the patient. On this regime he became rapidly afebrile and asymptomatic. He was discharged March 28, 1947, at which time the erythrocyte sedimentation rate was 20 mm. per hour. A heart rate of 81 was recorded. The P-R interval was 0.24 sec.

When seen in the Medical Out-Clinic on May 1, 1947, no new findings were described, but the erythrocyte sedimentation rate was 43 mm. in one hour and there were changes toward positiveness of T₂ and T_{4F}. Visits to the Medical Out-Clinic occurred on Sept. 9, 1947, Nov. 10, 1947, and March 22, 1948. Of significance is a transient episode of complete A-V heart block recorded

electrocardiographically on March 22, 1948.

In February 1948 he had an episode of aching in the shoulders and fingers, accompanied by fever lasting several days. Two months later a similar illness occurred.

He became asymptomatic and on Oct. 9, 1948, went to Nebraska, where he worked seven hours

On November 1 there was slight edema of the ankles. Moist rales were heard in the right lung base. Digoxin, 0.25 mg., was given twice daily, and mercurhydrin, 2 cc., was administered on November 1 and at intervals of two to five days thereafter. Crystacillin, 300,000 units every eight hours, was begun on November 5, and on November 8 he was given a low salt diet but he ate little. On November 15 dullness was found in the left lung base area. Breath sounds were absent over the same region. The liver had become readily palpable and tender. Ankle edema was increasing. Four blood cultures were obtained. There was no growth in two, and *Staphylococcus albus* was present in both the others (the stopper was moist in one flask).

From this time onward the patient weakened steadily. He was never free of edema or rales in the lung bases. His temperature, which had reached normal by Nov. 23, 1948, rose abruptly to 104 F. on December 15, and remained near this level until December 19. On this day the pulse rose suddenly to 150 per minute, and he became intensely cyanotic. He died within a few minutes after the onset of these symptoms.

Clinical Diagnosis

Rheumatic Heart Disease

Pancarditis, active

Aortic insufficiency, left ventricular preponderance

Mitral stenosis

Regular rhythm

Angina pectoris

Congestive cardiac failure

Dr. Lyle Carr (Internal Medicine): We are dealing with a patient today who does not seem to be much of a diagnostic problem so far as primary disease is concerned, but he does present problems concerning the various complications and ramifications that have occurred since illness began. He was first seen on the Pediatric Service at 11 years of age. His local physician had

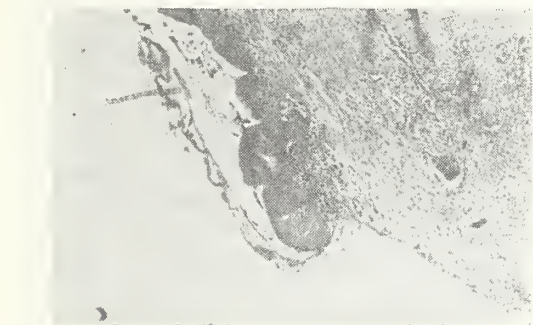


Fig. 2. Vegetation on Mitral Valve. (Note intense cellulitis in valve.)

daily picking corn. On Oct. 16, 1948, he played baseball vigorously for 30 to 45 minutes. On October 17 he noted dull aching continuous pain in both shoulders, the left thigh and right ankle. This was more severe upon motion of the joints, but redness or heat was not noted. Dull and occasional sharp stabbing pains were experienced in the upper abdomen. When he was admitted to this hospital on October 21, he was acutely ill. The rectal temperature was 103.2 F. The carotid arteries pulsated visibly and a thrill was palpable over them. Shaking of the bed was noted with each heart beat. The precordium was overactive, especially above the apex, which was found in the sixth interspace in the mid-axillary line. Loud systolic and diastolic murmurs were heard best in the second left interspace, where a diastolic thrill was palpable. Cardiac rhythm was regular with a rate of 112 per minute. Blood pressure reading was 145/50. Percussion and auscultation of the lungs revealed no abnormality. The liver was not palpable and no edema was demonstrable. He was given sodium salicylate, 1.2 gm. four times a day, but the fever continued. On October 23 he complained of severe precordial pain that radiated to the left arm. Some moist rales were noted in the left base at this time. An electrocardiogram showed inversion of T waves in the first three precordial V leads, which were not present on a tracing taken routinely the day before. No S-T segment shift was evident. The pain lessened somewhat, but morphine sulfate, 10 mg. every four to six hours, was necessary thereafter to control the discomfort.

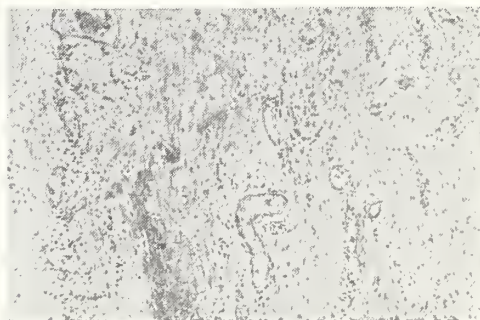


Fig. 3. Pericarditis. (Note darkly stained fibrin in central portion of field.)

made a diagnosis of acute rheumatic fever. The findings were quite typical, and there is no need to comment upon this particular portion of the illness except to note that a blood pressure at this time was 105/60 and to mention the fact that he received only intermittent therapy with sodium salicylate during his hospital stay. It is of some interest to note that two months after his admission a tonsillectomy and adenoidectomy were performed.

The two reasons for performing tonsillectomy and adenoidectomy are usually either objective or indirect. Objectively, it is the size and appearance of the tonsils that determine whether or not they are to be removed, but it was for the indirect reason, predominantly, that his were taken out. As his rheumatic fever process was apparently quiescent at the time, it was hoped that a prophylactic result might be achieved. It is of some interest that Wallace and Brownie-Smith in 1936 found no evidence that tonsillectomy before the age of 5 years protected the child against acute rheumatic infection, and comparison with a controlled series suggested that it might increase the susceptibility of a child to acute rheumatic fever.

At the age of 19 he returned to the University Hospitals, having had his appendix removed two weeks prior to admission. The abdominal pain and fever did not subside, even with the institution of penicillin therapy postoperatively, and it would seem likely in retrospect that this episode of disability was due to an exacerbation of the rheumatic process, with the abdominal pain also being upon that basis.

Poynton in 1925 first described rheumatic peritonitis, and Worms in 1930 treated two patients with abdominal pain and noted rapid subsidence of the symptoms. Berger and Reitman in 1945 each described 4 patients manifesting this symptomatology associated with acute rheumatic fever and pointed out the importance of a therapeutic test with salicylates in cases of diffuse peritonitis without evidence of an abdominal mass, tenderness or rebound tenderness in one localized area, such as the right lower quadrant. Two possible explanations for the pain have been postulated: (1) that it is a rheumatic peritonitis, and (2) that it is a myositis involving the muscular structures of the abdominal wall. It might be interesting to note whether or not the pathologists found any evidence of either of those two lesions. At the time of this admission the peripheral findings of aortic insufficiency had developed, as noted by the wide pulse pressure and the pulsations in the peripheral vessels as well as a dias-

tolic murmur heard on partial compression of the femoral artery. No evidence of congestive failure was noted on the entrance examination. Confirmatory evidence of an acute exudative process was a leukocytosis and a rapid erythrocyte sedimentation rate. Two of nine blood cultures reported a growth of *Staphylococcus aureus*. This is an uncommon pathogen in the production of subacute bacterial endocarditis. Although it must be remembered that there had been some previous penicillin therapy, it does not seem likely in view of the later hospital course that this particular organism was a source of his difficulty. Because of the particular type of cardiac lesion, that of aortic insufficiency, it is important to note that the Kolmer and Kline tests were negative on each of his hospital admissions.

On the second hospital day an episode of shortness of breath occurred. Examination at that time revealed evidence of impaired resonance over the left lower lung field, with bronchial breath sounds demonstrable on auscultation. Penicillin was administered on the assumption that a pneumonic process was present, but on the fifth day after admission a pulsus paradoxus was noted, along with a precordial friction rub, downward rotation of the liver, and persistent tubular breathing over the left posterior lung field. Clinically, a pericardial effusion was self evident, with the fluid compressing the lung in the vicinity of the angle of the left scapula. Penicillin was discontinued and salicylates were administered. The T wave changes described in the electrocardiogram are quite compatible with those of a pericarditis. The acute rheumatic process apparently subsided, and three months after admission he was discharged with minimal evidence of activity but, of course, with considerable evidence of cardiac damage.

Readmission to this hospital was accomplished one and one-half years later, at which time the peripheral vascular findings were much the same as they had been; wide pulse pressure, severe arterial pulsations, and diastolic and systolic thrill and murmur, especially at the left sternal border, were again described. Urine analysis revealed albuminuria and the presence of erythrocytes, which brings to mind the possibility that a disseminated lupus erythematosus, periarteritis nodosa, or subacute bacterial endocarditis might be present. However, acute rheumatic fever in congestive heart failure likewise can be associated with these findings. Five blood cultures were reported negative at this time, and the electrocardiogram throughout this visit revealed altered auriculoventricular conduction and T wave findings

that are explainable on either the basis of a pericarditis or a myocarditis. It might be well to point out at this time that the typical electrocardiographic findings associated with a pericarditis are apparently due to involvement of the myocardium immediately adjacent to the pericardium. Also significant on this admission was a demonstration of posterior displacement of the esophagus in the region of the left auricle, indicating possible left auricular enlargement. At the time of his discharge from the hospital in March 1947 there was some evidence of continuing activity of the rheumatic process, and the auriculoventricular conduction was still impaired. During the next year examination on several out-clinic visits indicated low grade but continuing activity of the rheumatic process, and one transient episode of complete A-V heart block was recorded electrocardiographically in March 1948.

He apparently felt well enough so that on Oct. 9, 1948, he began working seven hours a day picking corn and terminated a week's work by playing baseball vigorously for 30 to 45 minutes. The next day joint pain appeared as well as pain in the abdomen. The cardiac findings were as previously described, but his heart was beating so forcefully that the bed shook each time his heart beat. Sodium salicylate therapy was instituted, without immediate relief of symptoms, and two days after admission, in addition, he complained of severe precordial pain, which could be interpreted on a physiologic basis as angina pectoris, because the association of anginal pain with a low diastolic pressure of aortic insufficiency has long been noted. T wave inversion in leads V₁, V₂ and V₃ of the precordial electrocardiogram not associated with S-T segment shift or other abnormalities can be explained on an ischemic or inflammatory basis. On November 1 congestive heart failure became even more manifest. Digoxin was administered in a daily maintenance dose, and diuresis was attempted with the aid of mercurhydrin. Dullness was discovered in both lung bases, with absent breath sounds. It should be noted that the breath sounds were not increased, as they had been previously when the pericardial effusion was causing pulmonary compression. Increase in size as well as tenderness of the liver indicated its congestive state. The growth of a different organism from the blood cultures in 2 of 4 specimens from that on the previous attempts should be noted, but it is likely that these organisms were contaminants. His terminal episode was one associated with intense cyanosis and a rapid pulse. A few comments in regard to his over-all therapy might be in order.

Coburn in 1943 placed the empiric use of salicylates in the treatment of acute rheumatic fever on a sounder basis when he showed that 20 patients with plasma salicylate levels of from 359 to 400 gamma per cc. manifested a prompt and progressive subsidence of rheumatic inflammation and 20 patients with plasma salicylate levels below 250 gamma per cc. continued to manifest an active inflammatory process. As a general rule, it requires about 10 gm. of sodium salicylate daily in the absence of any appreciable amount of sodium bicarbonate to maintain the salicylate level recommended by Coburn. It is apparent that at no time during his hospitalization did this patient receive such amounts. Snull and others have pointed out the need for still larger amounts of salicylates to maintain such levels when sodium bicarbonate is administered simultaneously. Apparently no digitalis preparation was administered to this patient until unquestioned cardiac failure had set in, 19 days before his death. At this time he received only what might be construed a maintenance dose. According to Cushney, digitalis action on the mammalian heart may be divided into three stages. The first or therapeutic stage is that which we usually attempt to achieve. In this stage the rhythm becomes slower because of an inhibitory action; the ventricles are smaller, as a result of what is felt to be a direct action on the cardiac muscle; and if the heart is dilated, the relaxation of the ventricle during diastole is less than before administration of digitalis, so that cardiac output is ordinarily increased. The second stage is that due to excessive inhibitory activity and occurs all too frequently during the routine use of digitalis therapy. It is at this stage that the ventricular rhythm is slow and irregular, and although more blood is expelled per beat, the total output of the heart diminishes because the rate is so slow. In the third stage the ventricular rhythm becomes much accelerated, probably due to a direct increase of irritability of the heart muscle, although we would not expect this third stage to have appeared as a result of the amount of digitalis administered. The terminal low fluid intake and output, as it apparently existed, might have caused an excessive retention of digoxin and the terminal episode. The value of diuretics usually outranks that of digitalis in the treatment of heart failure associated with acute rheumatic carditis, but their administration apparently did not greatly alter his terminal state. The terminal event was felt to be a ventricular arrhythmia, associated with the disease process.

Dr. E. Van Epps (Radiology): These films are in chronologic sequence from the time the patient

was first seen in this hospital. The first one was taken on April 9, 1937, at which time the patient was 11 years of age. The heart was not enlarged. The Danzer ratio was 0.47. There is a straightening of the left border of the heart, which we associate radiographically with mitralization on the basis of right ventricular enlargement, with rotation of the heart on its vertical axis producing this straightening. It also may or may not be associated with a left auricular enlargement. On March 18, 1945, we see a tremendously enlarged heart or cardiac silhouette, the Danzer ratio being 0.78. The heart is considerably enlarged, both to the right and to the left of the midline. There is also pulmonary congestion, as evidenced by a hazy increase in density throughout the visualized lung fields. The differential diagnosis between pericardial effusion and acute dilation due to myocardial insufficiency is not always possible radiographically and may be impossible fluoroscopically. As far as the film itself, a suspicion of pericardial effusion is present, and with the clinical history such a diagnosis is considered likely. Pathologists will agree, I am sure, that they have found quite large hearts based entirely upon myocardial weakness in which there is acute dilatation of the heart without evidence of valvular changes. Such cases produce a similar silhouette without pericardial effusion. I'd like to emphasize also Dr. Carr's statement that the findings of tubular breathing in the left base posteriorly and the signs of dullness which we commonly associate with a pneumonic process can occur not only in pericardial effusion, but also in dilatation of the heart of the magnitude such as we see here. No pneumonia need be present. This patient recovered from this under therapy.

On Jan. 23, 1946, we have a radiograph of the heart showing a Danzer ratio of 0.47, a small aortic knob, some enlargement to the right of the midline, and beginning narrowing of the waist, as well as a depression of the apex of the heart. A left lateral esophogram was done on Jan. 27, 1947. This shows a definite left auricular enlargement. The other films are representative of various visits to the hospital; all show a small aortic knob with contour suggesting left ventricular enlargement. The two films taken on Jan. 10, 1947, were after a cardiac fluoroscopy, at which time it was felt that the individual had a 2 plus right and about a 4 plus left ventricular enlargement. Also, an esophogram taken at this stage of the disease shows only a slight retrodisplacement, and I have seen such retrodisplacements called left auricular enlargement. If it is, and I'm not sure, this must be a mild enlarge-

ment. As we go through the last films, we begin to see the patient developing cardiac failure, enlargement of the heart, elevation of the diaphragm and congestion. And the last film taken on Dec. 15, 1948, demonstrates linear atelectases in the bases in addition to the cardiac failure. I would like to state here that the differential diagnosis between pericardial effusion and the dilatation of the heart is difficult to make radiographically and fluoroscopically, and, only recently, since the advent of angiocardiology, has the diagnosis been made with greater ease. It should be utilized in such cases in the future. My final impression was 2 plus right and 4 plus left ventricular enlargement, without evidence of left auricular enlargement, in a patient with a cardiac failure.

Dr. H. Hamilton (Internal Medicine): Did they demonstrate by fluoroscopy left auricular enlargement on the last admission?

Dr. E. Van Epps: No.

Necropsy Findings

The major anatomic findings were in the heart. The pericardial cavity was obliterated by old fibrous adhesions in which active cellulitis with recent exudation was present. Old adhesions loosely bound the pericardium to the adjacent structures in the chest. Active cellulitis was present in the tissues outside the pericardium. The heart was tremendously dilated and hypertrophied and with the adherent pericardium weighed 1,500 gm. The hypertrophy mainly involved the left ventricle. The mitral valve leaflets were moderately thickened, but less so than the aortic cusps. These were greatly retracted as well as thickened. Both valves were the site of an active cellulitis, and a few hyalinized vegetations were present on the mitral valve. The myocardium showed an unusually severe cellulitis throughout, without well formed Aschoff bodies. Both the aortic and mitral valve rings were dilated, more prominently in the former. Other findings were essentially those of congestive heart failure.

Necropsy Diagnoses

Acute and chronic rheumatic pancarditis with aortic and mitral valve insufficiency.

Cardiac hypertrophy and dilatation, extreme.

Passive congestion of viscera.

Fatty metamorphosis of liver, mild.

Dr. E. Warner (Pathology): This case at the time of autopsy was one of rheumatic pancarditis with terminal congestive failure. There was no pulmonary embolus, nor was there any signifi-

cant pneumonia. There was history of abdominal pain. There was some evidence of peritonitis in that the capsule of the liver over the dome of the liver was thickened with scar tissue in a patchy fashion. It was not bound to the diaphragm, but there was evidence of exudate, some time in the past, over the dome of the liver.

Dr. R. Jackson (Pediatrics): The natural course of rheumatic fever is well demonstrated by the patient presented here. According to the history, the age at onset was 10 years. At the time of first observation in the Children's Hospital, he had definite, but minimal, cardiac involvement. In 1937 there were no facilities available in Iowa to provide convalescent care for children with rheumatic fever. When the child was last examined in the Pediatric Department, there were no signs of active rheumatic fever. Why this child required convalescent care at home for three years is difficult to understand unless he had a low grade active form of the disease. Ordinarily, a child of this age will make a complete recovery from an attack of rheumatic fever in four to six months. Our social record shows that the child was receiving poor environmental care. In 1940 a field visit was made as part of our rheumatic fever program, and at that time the worker reported that the local community did not desire periodic check-up examinations in the rheumatic fever clinic. The records stated that the child would be returned to the hospital if such care was necessary. The fact that the child was able to participate in strenuous sports and do heavy work prior to his readmission to the University Hospitals in 1945 does not indicate that he was free from considerable cardiac damage during this interval. Many children with significant cardiac damage are capable of strenuous physical activity. The patient must have had a recurrence some time between 1937 and 1945 to explain the development of aortic insufficiency. Apparently, the disease process became inactive in June 1945.

In a study of the rate of recurrence of rheumatic fever within one year of the previous attack for children 4 to 16 years of age, the rate for an Iowa control group did not differ significantly from the rate reported by Wilson for recurrence within one year of previous attacks. In other words, there is evidence to show that the natural course of rheumatic fever in Iowa is not different from that reported by other clinics.

Many of the children with rheumatic fever living in Iowa come under the care and supervision of the Children's Hospital and the clinics of State Services for Crippled Children held

throughout the state. The recrudescence of rheumatic fever among 266 of these children has been studied by us recently. This study was undertaken to determine the recurrence rate in a group of rheumatic subjects who received special attention to improve their diets and level of environmental care. Many of the observations were made prior to the use of sulfonamide prophylaxis by anyone, and we had not used sulfonamide drugs, although many clinics had used them in recent years.

The 266 patients of the Iowa study group, from 4 to 21 years of age, were under observation a total of 893.5 person-years. For the age period 4 to 13 years, there were 37 recurrences and 3 deaths for 504.5 person-years of observation, or a rate of 7.9 per cent; for the age period 14 to 16 years, there were 24 recurrences for 234 person-years of observation, or a rate of 10.3 per cent; for the age period 17 to 21 years, there were 7 recurrences for 155.5 person-years, or a rate of 4.5 per cent.

The recurrence rate of rheumatic fever in this study group of rheumatic subjects who received special attention to improve their diets and level of environmental care is significantly different from that reported by Wilson for a random sample. The recurrence rate for the study group is lower for the age group 4 to 13 years, and slightly higher or the same for the older age groups. It is noteworthy that the age 4 to 13 years is a period when the nutritional requirements of the child are high and a time in the child's life when his habits of living can be controlled with less difficulty than in children approximately 14 years and older.

Of the 51 children who had recurrences, the 13 who had them with carditis comprise the group that suffered the serious effects of the disease. An analysis of their histories and environmental care shows that 3 of these children died within two months of their discharge from the sanatorium, and, in retrospect, there is doubt about whether or not their disease was inactive. Their environmental care was fair or better except for one boy who lived in a poor social situation. The 10 children who survived with carditis, on the whole, lived in poor home environments; all lived in poor social situations—7 in limited economic circumstances, 7 on a poor and 3 on a fair dietary regimen.

In recent years a number of clinics have used sulfonamide prophylaxis and have reported successful results in the prevention of recurrences. For the accumulated reported groups of rheu-

(Continued on page 172)

STATE DEPARTMENT OF HEALTH

Walter L. Loomis

RABIES IS INCREASING IN IOWA

While the focus of our attention is at present fixed upon Polk County, it is well to reflect that a similar rabies epidemic might occur in any of our other 98 counties. In fact, rabies is currently present in at least 25 other counties. A total of 95 animal heads were found positive in 1948, as reported by the State Hygienic Laboratories at Iowa City, and the Diagnostic Laboratories of the Division of Veterinary Science at Iowa State College. To date, March 12, these laboratories have reported examination of 57 animals positive for rabies. The counties from which rabies in animals have been reported, the number of positives, and the kind of animals involved are as follows:

COUNTY	NUMBER	ANIMAL
Benton	4	3 cows 1 horse
Black Hawk	1	1 cow
Calhoun	1	1 cow
Clinton	1	1 dog
Dallas	1	1 dog
Decatur	2	1 dog 1 skunk
Delaware or Dubuque	1	1 cow
Dickinson	1	1 horse
Emmet	1	1 dog
Floyd	1	1 cow
Greene	1	1 dog
Guthrie	2	1 cow 1 cat
Iowa	1	1 cat
Johnson	2	1 skunk 1 dog
Linn	2	1 cow 1 skunk
Mahaska	1	1 cow
Muscatine	1	1 cat
Palo Alto	2	1 cow 1 skunk
Pocahontas	1	1 skunk
Polk	23	2 cats 18 dogs 1 raccoon 1 bull 1 squirrel 1 raccoon
Pottawattamie	1	1 cow
Poweshiek	1	1 skunk
Tama	1	1 cow
Warren	3	2 raccoons 1 cow
Webster	1	
57 Total		

The distribution by week is as follows:

WEEK OF	NUMBER OF CASES	WEEK OF	NUMBER OF CASES
January 1	2	February 1	3
8	2	12	8
15	1	19	4
22	3	26	13
29	5		
January Total	13	February Total	28
		March 5	9
		12	7
		March Total as of March 12	16

Although the dog is the animal accounting for most of our reported rabies, wild animals, such as skunks, foxes and raccoons, may act as a reservoir of the infection. New York state believes that its recent increase of rabies in dogs is due to infection from foxes. Certain southern states, as Alabama and Louisiana, a few years ago found that, with an increase in foxes in certain counties and parishes, there was a simultaneous increase in rabies among dogs. High percentages of the foxes examined were found to have rabies. Dr. I. H. Borts, director of the State Hygienic Laboratories, has for many years observed that of the different animals whose heads were sent in for examination, the highest per cent of positives were from skunks. The skunk that attacks a farmer's dog in broad daylight in the dog's own barnyard is not behaving naturally and is very likely rabid, as is, similarly, the raccoon or fox that attacks a person rather than fleeing. While there is no indication that skunks have increased in numbers, we do know that the fox population has increased. These wild animals or the dog with the wanderlust of early rabies can easily bring infection into an area not previously involved.

The State Health Department recently drafted a proposed control program for rabies. If you do not have a copy or would like additional copies, they will be mailed to you upon request.

NO SMALLPOX YET

Nineteen hundred and forty-eight was our first calendar year without a case of smallpox in Iowa. We have a long way to go before we can make a statement such as the state of Massachusetts recently made: "February 25 will be the seventeenth anniversary of the reporting of the last case of smallpox which occurred in Massachusetts. This is due to the fact that almost 99 per cent of those over 5 years of age have been vaccinated." Have we attained that level of protection in any one community in Iowa?

ISOLATION FOR MUMPS

The doctor's often repeated questions, "Don't I know when a child is over an attack of mumps? When the child has completely recovered in 10 days, why must he be kept out of school for 14 days"?, have been answered.

There is now no set minimum number of days for isolation of the case of mumps in Iowa. Instead, isolation may be terminated when swelling and tenderness of the involved glands has disappeared. This change is in accordance with the recommendations of the American Public Health Association.

MEASLES

Total number of cases of measles reported for years 1940-1949:

1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
6,018	5,167	6,612	5,903	5,552	1,279	4,288	4,627	10,151	166
									(as of Feb. 28)

Cases reported for the months of January and February of above years:

909	1,230	1,120	900	2,036	221	543	121	4,030	166
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Since only a small number of cases of measles were reported for the first two months of the year and last year was an epidemic year for the disease in Iowa, we may not expect great numbers of cases during the remainder of the season. Nevertheless, it is well to mention again that the State Health Department has on hand a supply of gamma globulin for either prevention or modification of measles. Since the supply of the gamma globulin is limited, the following points regarding its use are to be emphasized:

1. The immune globulin, used either for prevention or modification of the disease, should be given during the six days after the first exposure to measles. The dosage given depends upon the weight of the child and whether prevention or modification of measles is desired.

2. Children under 3 years of age, older children suffering from tuberculosis, pulmonary disease, rheumatic heart disease, whooping cough or other contagious diseases, and children who are debilitated should receive a protecting dose.

3. Older children otherwise in good health should be given no more than a modifying dose. They will then develop a mild case of measles that will afford permanent immunity.

4. Only a passive type of immunity of about a month's duration is conferred to those children receiving the protective doses of the serum.

5. Children to whom a modifying dose has been administered who subsequently develop measles are just as infectious to others as though they had received no protection. In fact, the incubation period may be prolonged over the usual ten day to two week period.

MORBIDITY REPORT

Disease	Feb. '49	Jan. '49	Feb. '48	Most Cases Reported From
Diphtheria	2	4	5	Chickasaw, Delaware
Scarlet Fever	171	190	215	Boone, Polk, Hamilton
Typhoid Fever	0	0	2	.....
Smallpox	0	0	0	.....
Measles	109	57	287	Cerro Gordo, Story, Woodbury
Whooping Cough	19	17	22	Dallas, Dubuque, Cass
Brucellosis	29	16	31	Scattered
Chickenpox	503	689	321	Black Hawk, Boone, Clinton
German Measles	39	10	11	Dubuque, Clinton, Hancock
Influenza	2	0	28	Ida
Meningitis	2	6	7	Winnebago, Johnson
Mumps	507	413	363	Clinton, Dubuque, Pottawattamie
Pneumonia	16	11	16	Boone, Polk, Scattered
Poliomyelitis	3	9	0	Pocahontas, Adams, Harrison
Tuberculosis	45	50	94	For the State
Gonorrhea	61	59	71	For the State
Syphilis	128	179	125	For the State

The JOURNAL of the Iowa State Medical Society

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College of Medicine Issue

Once more the JOURNAL is indebted to the faculty of the College of Medicine of the State University of Iowa for a special number contributed by them. Especially honored this year are Dr. Clarence E. Van Epps and Dr. Arthur Steindler, both of whom recently retired as heads of their departments. This issue marks the first one under the aegis of Dean Soley, whom we are again happy to welcome.

These special issues of the JOURNAL have varied in the past three years: the first followed the pattern of unrelated papers; the second was an issue on general information about the medical school and certain problems of medical education; and now the present one is devoted entirely to heart disease. Nineteen hundred and forty-nine seemed an auspicious year for this subject, in view of the national emphasis on heart disease and the organization of the Iowa Heart Association. This varied presentation has proven stimulating, without limiting the material to any special group of Iowa physicians.

We are indebted to the faculty committee, headed by Dr. Lewis E. January as chairman, with Drs. J. S. Gottlieb, E. W. Scheldrup and C. H. Millikan. These gentlemen are certainly to be congratulated for maintaining the high standards that one of these special issues exemplifies. Contributions such as these indicate clearly that our College of Medicine continues to advance and maintain its high position among the medical schools of the country.

State Meeting Time

It is again our pleasure to hereby extend a personal invitation to the readers of the JOURNAL to attend the Ninety-Eighth Annual Session of the Iowa State Medical Society, which will be held in Des Moines, April 18 through April 21. Headquarters, as usual, will be located at the Hotel Fort Des Moines. The program, as presented in full in the March issue of the JOURNAL, promises discussions of general interest to every physician. The guest speakers are all well known in their special fields of activity. Sectional meetings will meet, as is customary, in their own sessions. Members of the Society are once again urged to attend the scientific and technical exhibits, not only to improve their own information but to let the exhibitor himself feel rewarded for his efforts in our behalf. These are the things that the ingenuity of private enterprise has created to help you make the medical care you give to your patients the finest in the world. If only to familiarize yourselves with the newest modalities available to you, attend the meeting without fail.

A "smoker" will be held on Tuesday night, April 19. The annual dinner of the Society, to be held on Wednesday night, April 20, will be in the nature of a dinner dance, as proved so popular last year. The golfers will meet in their annual tournament on Monday, April 18, 1:00 p. m., at the Des Moines Golf and Country Club. Dinner follows at Club 100.

The problem of hotel reservations is one which should again demand your early attention, and you are urged to take care of the matter as soon as possible. Once more we look forward to your presence in Des Moines in order that the Annual Meeting will prove as successful as heretofore.

Fat Absorption

With the development of Sorbitan monooleate polyoxyethylene, which is marketed by Abbott Laboratories under the trade name of Sorlate, patients with disturbed ability to absorb injected fat may now find the way to improve the absorption of fats and fat-soluble substances from the small bowel in conditions where such difficulties constitute a problem of major clinical importance. The typical wiry, slender individual who maintains it is impossible to gain in weight, irregardless of diet or any other measures, may find a helpful adjunct in this new product. In conditions of serious malnutrition, secondary to such disturbances as celiac disease, sprue, chronic inflammatory disease of the jejunum or ileum, or following entero-anastomoses which short circuit large por-

tions of the small intestine, this derivative may produce significant clinical benefit.

Sorlate is recommended as an emulsifying agent capable of bringing about an increased absorption of dietary fat in conditions where steatorrhea is a prominent feature. Possessing emulsifying and wetting properties, owing to its effect on surface tension, Sorlate brings about, when mixed with food, a more homogeneous and finer emulsification of dietary fat. The drug is nontoxic orally for both animals and human beings.

Jones, Culver and their associates* have used dosages as high as 15 gm. daily for months without any untoward symptoms and without any erythrocyte or leukocyte changes, or evidence of injury to the kidney or liver. The possibility of oxalic acid poisoning would appear to be negligible, since the polyoxyethylene fraction is excreted quantitatively in the urine and stools, with no increase in oxaluria. Rarely increased bowel activity was noted among their patients.

Although it may take several months for beneficial effects to be observed, any agent that will correct faulty absorption of food through the intestinal mucosa will be welcomed in the treatment of diseases that previously have defied all attempts to bring about significant weight gains.

Easter Seal Campaign

The annual campaign conducted by the Iowa Society for Crippled Children and Adults through the sale of Easter seals this year extends from March 17 to April 17. The varied activities of this society for the handicapped are well known among most physicians of the state. In 1948 a new service was provided by a summer speech center held at Grinnell College. A similar clinic will be held at Grinnell College June 7 through July 16, 1949, with the addition of a remedial

reading program as an aid to children with both reading difficulties and speech deformities. With a carefully planned recreational program to make it interesting and entertaining, the course will also provide an opportunity for each child to participate in group activities and to develop social confidence.

Physicians are again invited to contribute to the Easter seal campaign and to encourage others to aid the worthy objectives of this organization,

which must depend entirely upon this method for the raising of funds.

Hats Off to the Auxiliary

The March issue of the JOURNAL carried an account of the first national conference on the American Medical Association's educational campaign, outlining its objectives and how they were to be accomplished. In the brief span of time elapsed since then, the Polk County Woman's Auxiliary has "gone to town" in an extensive drive, and other auxiliaries over the state are beginning to function in similar fashion. Members of the Public Relations Committee of the Polk County Auxiliary asked for help and advice in activating a program which they had outlined. First of all, they wanted to contact the many firms in Polk County and ask permission to distribute pamphlets to the workers in their pay envelopes. Second, they wanted to talk to friends and lay persons and to ask them to wire their two senators and their congressman, expressing their opposition to S. 5 and similar legislation. Third, they wanted help in preparing talks to give to small groups of which they are a part.

Their program coincided with that suggested for the Auxiliary by Whitaker and Baxter, and they were given a green light by both the county and state medical societies. An indoctrination meeting was held February 23 at which some 30 members were present. This was so successful that a week later another meeting was held for state members, again with an attendance of between 25 and 30.

The American Medical Association was asked for pamphlets to be used in the Polk County campaign, but its supply would not be available until some time in April. The State Society, therefore, prepared four small pamphlets for easy printing and ordered 40,000. The Auxiliary members helped fold, count and package these, and then they distributed them. They went so fast that an additional 75,000 were ordered, and at this writing, another 25,000. In Polk County alone over 70,000 pamphlets have been utilized in the Auxiliary campaign.

Many telegrams and letters have been sent to Washington to our Congressional delegation, and talks have been scheduled before various lay groups. All of this cannot help but have a beneficial effect. Many people who never heard of S. 5 before are now conscious of the fact that it is up for consideration, and they have a far greater realization of what is being proposed by the administration, and what it will mean to them



*Jones, C. M.; Culver, P. J.; Drummey, G. D.; and Ryan, A. E.: Modification of fat absorption in the digestive tract by the use of an emulsifying agent. *Ann.Int.Med.*, xxix:1 (July) 1948.

in dollars and cents and in quality of medical service.

Work is just starting in other auxiliaries, and it is hoped that all counties will carry on a similar program. There is no county too small or too rural; all have groups to which the pamphlets may be given so that medicine's story may be presented. This is a field in which the Auxiliary can be most useful, as has been proved in Polk County.

(Continued from page 167)

matic patients who have received sulfonamide prophylaxis, the recurrence rate for major episodes is 1.5 per cent. These reports show that the drugs do have prophylactic value. The reported number of toxic reactions show the sulfonamide drugs to be by no means harmless. In addition to the toxic reactions from chemotherapeutic or antibiotic agents, there is also the danger that the host may lose his ability to resist the organism and, also, that the bacteria may become resistant to the drugs. Quinn, reporting recently an epidemiologic study of rheumatic fever in Navy training centers, states that "At one time the Navy was faced with a desperate situation wherein epidemics of hemolytic streptococcus infections were a grave menace to the training program. Because of the seriousness of the problem, prophylaxis with sulfonamide compounds was instituted. The incidence of streptococcus was reduced dramatically and, at the same time, the rate of rheumatic fever fell; these reductions, however, were only temporary. Later, certain strains of hemolytic streptococcus acquired resistance to the sulfonamide compounds, and the incidence of infection by these organisms returned to epidemic proportions. Similar experiences were observed in the other Navy and Army establishments." Baldwin reported that from her observations rheumatic children receiving sulfonamide prophylaxis while living at home showed no appearance of any sulfonamide resistant strains of streptococci.

A review of the histories of the 266 Iowa rheumatic children showed that, if the disease is definitely inactive, an excellent diet and wholesome living conditions will practically eliminate the chances of a recurrence with carditis. It is my opinion that sulfonamide prophylaxis is indicated for only those children recovered from rheumatic fever who have definite rheumatic heart disease and are forced to live in an environment that does not provide a good diet and at least a fair level of general care. It is possible that oral penicillin may prove to be safer and as effective as sulfonamide prophylaxis.

For the child in whom rheumatic fever has

been inactivated, or for any child, the treatment of infections is most important. It is during this phase of the invasion of the beta hemolytic streptococcus that we must watch and give adequate medical care to make certain, if possible, that the child has completely recovered from the infection. With an invasion of beta hemolytic streptococcus, the rheumatic susceptible child is in grave danger of another cycle of rheumatic fever being initiated. In my opinion, which is based on clinical impressions, many attacks of rheumatic fever, including first attacks, might have been avoided if the child, when he first became a victim of an acute infection, had been put to bed, given good medical and nursing care, and kept in bed until all signs and symptoms of active infection had disappeared. While I have not endorsed giving sulfonamide prophylaxis routinely, I think when there is an epidemic of beta hemolytic streptococcus, the rheumatic susceptible child should be given sulfonamide prophylaxis under the supervision of a physician. What I would avoid is giving sulfonamides routinely and continuously and, by this dangerously simple device, thereby neglecting the possibilities and benefits derived from improvement of the child's health by adequate diet and better living conditions.

DOCTOR SECRETARY MEETING IN MARSHALL COUNTY

Marshall County Medical Society authorized a meeting of its office personnel for purposes of becoming more familiar with socio-economic problems involving the medical profession.

Donald L. Taylor, field secretary of the Iowa State Medical Society, discussed compulsory health insurance, indicating many of the problems that would confront medical personnel if such a program was enacted.

Blue Shield Medical Plan was discussed at some length by Wilbur R. Quinn, executive director of Iowa Medical Service. This subject was especially significant as the county-wide community drive for Blue Shield and Blue Cross was under way that week. During this campaign, it was possible for all those people in the county not previously eligible for group enrollment to obtain this coverage on an individual basis. The Veterans' Home Town Medical Care program, handled through Iowa Medical Service, was described by Mr. Quinn. General discussion of both programs followed and considerable interest was expressed.

This meeting held March 10 at the Hotel Tallcorn in Marshalltown proved very helpful to all personnel in attendance. Nearly every doctor's office was represented.

NEWS NOTES

from the

Committee on Medical Service and Public Relations

MEETINGS OF WOMAN'S AUXILIARY AND COUNTY SOCIETY SECRETARIES

Twenty-five representatives of the Polk County Medical Society's Woman's Auxiliary attended a meeting at Hotel Savery, Wednesday, February 23, held for the purpose of familiarizing its members with the proposed program of the American Medical Association and the Iowa State Medical Society to answer President Truman's Health Program. Dr. Allan B. Phillips, secretary, Iowa State Medical Society, was the introductory speaker and also served as moderator for the program. Mr. Edwin Kingery, executive secretary, Polk County Medical Society; Mr. Wilbur R. Quinn, executive director, Iowa State Medical Service, and Mr. Donald L. Taylor, field secretary, Iowa State Medical Society, were the discussants.

Dr. Phillips outlined the educational programs of the A.M.A. and the Iowa State Medical Society that are in operation in which the members of the Auxiliary would be able to take an active part. He stressed the need for the women to know the particulars of socialized medicine and how it would affect not only the medical profession, but the whole of the American people. He urged them to gain some knowledge also about what the state and county medical societies are doing to oppose compulsory health insurance.

Dr. Phillips called on Mr. Taylor to discuss the bills for compulsory health insurance that have been introduced in the Eighty-first Congress, and to suggest some of the things the women could do to assist the state office in carrying out its program of educating the public in the advantages of voluntary insurance over compulsory.

Mr. Kingery then discussed the problem as it exists in Polk County and advised the women of the work they could do at the local level. Mr. Kingery emphasized the necessity for them to keep informed about the proposed legislation for compulsory health insurance, and to know the particulars of the voluntary insurance program that is made available by the profession. He suggested that they take the pamphlets that were prepared

by the state office and the National Physicians Committee to various plants and business houses for distribution to the employees, and that they discuss with management the voluntary plan, Blue Shield, that is now purchasable to protect people against catastrophic medical and surgical bills.

Mr. Quinn concluded the program by discussing Iowa Medical Service (Blue Shield). The meeting closed with a question and answer period.

The following week, Wednesday, March 2, a meeting of county medical society secretaries was held at Hotel Fort Des Moines, for the purpose of outlining the programs relative to compulsory health insurance of the A.M.A. and the Iowa State Medical Society. The meeting was attended by 45 representatives of the various counties. Dr. James E. Reeder, president, Iowa State Medical Society, conducted the meeting. The speakers were: Dr. N. G. Alcock, president-elect, Iowa State Medical Society; Dr. Wayland K. Hicks, newly appointed chairman, Iowa Coordinating Committee of the A.M.A.'s educational program; Dr. John W. Billingsley, chairman of the Legislative Committee; Dr. Walter L. Bierring, Iowa health commissioner; the late Mr. George Kern, legislative counselor for the Iowa State Medical Society; Dr. Allan B. Phillips, secretary, Iowa State Medical Society; Mr. Wilbur R. Quinn, executive director, Iowa Medical Service; and Mr. Donald L. Taylor, field secretary, Iowa State Medical Society.

The meeting was called to inform members of the various county societies of the duties outlined for them in the program of the A.M.A. and the Iowa State Medical Society. The representatives who attended this meeting were expected to pass on the information they obtained to all of the members of their respective county societies.

For report of the meeting, March 2, of the Public Relations Committee of the Woman's Auxiliary of the I.S.M.S., see page 180 in the Woman's Auxiliary News section of this JOURNAL.

ANNOUNCEMENTS

American Association of Railway Surgeons—Sixty-first Annual Meeting, June 30-July 2, Drake Hotel, Chicago, Ill.

American Board of Obstetrics and Gynecology—General Oral and Pathology Examinations, Part II, May 8-14, Hotel Shoreland, Chicago, Ill.

American College of Chest Physicians—Fifteenth Annual Meeting, June 2-5, Ambassador Hotel, Atlantic City.

American Goiter Association—Annual Meeting, May 26-28, Hotel Loraine, Madison, Wis.

Chamber of Commerce of the U. S.—Community Health Institute, April 7, 9:30 a. m., Netherlands Plaza Hotel, Cincinnati, Ohio.

First International Congress on Rheumatic Diseases—May 30-June 3, Waldorf Astoria Hotel, New York City. Sponsored by International Congress against Rheumatism. Registration open, fee \$10.00. Instantaneous translations by means of I.B.M.

South Atlantic Association of Obstetricians and Gynecologists—\$100 Foundation Prize; 5,000 word manuscript, to be presented at Annual Meeting. For details write Dr. E. D. Colvin, 1259 Clifton Road, N.E., Atlanta, Ga.

AMERICAN ACADEMY OF NEUROLOGY

Establishment of the American Academy of Neurology has been announced. Three types of membership are available: Active Membership, limited to physicians certified in neurology, or both neurology and psychiatry; Junior Membership, for those physicians engaged in post-graduate studies in neurology or awaiting certification; Associate Membership, for those whose interests are in fields related to, but are not certified in, neurology.

The first scientific meeting will be held June 1-3, at the French Lick Springs Hotel, French Lick Springs, Ind.

Dr. A. B. Baker, Minneapolis, is president of the executive council; Dr. Pearce Bailey, Washington, D. C., vice president; Dr. Joe R. Brown, Minneapolis, secretary-treasurer. Included on the board of trustees is Dr. A. L. Sahs, Iowa City. Communications regarding the Academy should be addressed to Dr. Joe R. Brown, 19 Millard Hall, University of Minnesota, Minneapolis 14, Minn.

ALPHONSE M. SCHWITALLA LECTURES

Alpha Omega Alpha fraternity have arranged for annual lectures at St. Louis University Medical School to be known as the Alphonse M. Schwitalla lectures. The first in this series was delivered by Dr. Walter L. Bierring, March 24, entitled "Medical Echoes."

WARNING

The Federal Security Administration's Food and Drug Administration is making seizure of Syrup of Urethane, a cough syrup manufactured by Marvin R. Thompson, Inc. Physicians, pharmacists and consumers are warned that administration of Urethane in the quantity recommended on the label may cause a dangerous lowering of the white blood cell count.

Urethane came into use as a sedative about a century ago, but recent medical studies clearly demonstrate its potential danger when used as directed in the labeling of this syrup. However, when use of Urethane is discontinued, the white blood cell count ordinarily returns to normal in a short time.

The manner and extent of the distribution of some 34,000 packages of this product are such that neither the manufacturer nor federal, state and local health offices will be able to recall all bottles promptly.

INFANT MORTALITY 1947

The infant mortality rate in 1947 reached a new low, according to figures released by the National Office of Vital Statistics of the Public Health Service, Federal Security Agency. Although the number of deaths under 1 year of age recorded in the United States during 1947 was 119,173, or 8,110 more than in 1946, the infant mortality rate decreased from 33.8 per 1,000 live births in 1946 to 32.2 in 1947. Provisional figures for 1948 indicate a further decline to an estimated rate of 31.8.

Accounting for 75.7 per cent of the deaths in 1947 were premature birth with a mortality rate of 11.1; congenital malformations, 4.6; pneumonia and influenza, 3.6; injury at birth, 3.5; and asphyxia and atelectasis, 1.6. This was the first year that asphyxia and atelectasis has ranked among the five leading causes of infant deaths and that diarrhea, enteritis, and ulceration of the intestines has not.

The relative frequency of deaths under 1 year is greatest for the under 1 day age group and decreases steadily with age. Mortality is higher among nonwhite than white infants and among male than female infants.

The 1947 rates for the individual states ranged from 24.7 for Oregon to 50.8 for Arizona. Iowa had a rate of 28.5 compared to 29.9 for 1946, and a total of 1,817 deaths in 1947 and 1,681 in 1946, the increase reflecting the increase in number of births and not a rise in infant mortality.

CHANGE OF ADDRESS

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the Journal, 505 Bankers Trust Bldg., Des Moines 9, Iowa.

Association of Medical Examiners

Insurance medicine is a term that has been taken more or less for granted for the past 50 years. This subject by nature deals entirely with medical examining as it pertains to life, accident and health. To most of us, insurance examining has been a minor part of our general practice. Quite often it is treated casually, if not even as a nuisance.

Times have also changed, however, in insurance medicine. Life insurance policies are now held by approximately 78,000,000 people in the United States. As a consequence, life insurance examining has developed into a definite specialty in its own right. With heart studies, blood tests, basal metabolism tests, x-rays, sedimentation rates, as well as blood sugars, blood pressures, urinalyses and electrocardiograms, the range of insurance medicine obviously covers almost the entire field of physical examinations.

The field of insurance medicine is peculiar in one outstanding way. The examination is carried on under totally different circumstances than those encountered by an examiner when he checks a private patient. Under the latter condition the patient doesn't feel well and generally helps his doctor in obtaining an accurate word picture of his disorder. But the insurance examiner must often develop his story of the patient's condition by a less forthright method, because an applicant for life insurance may wish to conceal some of his disorders. The insurance examiner, therefore, should not only have the ability to examine carefully, but he must also develop some of the attributes of a Sherlock Holmes.

Insurance medicine has reached the point where several insurance companies have asked that time be devoted in medical schools to this subject. Actually, this is being done in some schools. The day is past when an insurance company will tolerate a doctor who will conduct a mediocre examination. In this world of ours we generally get that for which we pay. Some of the insurance companies, being very realistic, have increased the fees allowed for special and additional examinations. The result of this new policy has created the interest of an increasing number of doctors.

In March of 1948 a group of doctors in Des Moines, composed mostly of general practitioners who do a fair amount of insurance examining, organized as a group, calling themselves the Association of Medical Examiners. This organization was prompted by the feeling that the ability to develop oneself as an examiner would be helpful, both in the field of insurance medicine and in general practice.

This organization has developed slowly but surely. After the initial meeting, a president, vice president and secretary-treasurer were elected. The following articles of constitution were adopted:

ARTICLE I (Name): The name of this organization shall be the "Association of Medical Examiners."

ARTICLE II (Object): The object of this association shall be the establishment of an organized group for the improvement of life insurance examining.

ARTICLE III (Membership): The membership shall consist of chief, regular and assistant resident life insurance examiners.

(1) Active Members: Active members shall be those who are in good professional standing and pay in full such dues as may be required.

(2) The number of active members shall not be limited. A nonresident member is one who lives outside the city of Des Moines and West Des Moines.

(3) To elect a member, two-thirds (2/3) of those present will be sufficient for election. The name of any member may be dropped upon absence from three (3) consecutive meetings.

ARTICLE IV (Dues): The dues shall be \$6.00 annually.

ARTICLE V (Officers): The officers of the association shall be a president, vice president and secretary-treasurer. These officers shall be elected for a period of one (1) year.

ARTICLE VI (Duties of Officers): The president shall preside at all meetings and act as coordinator with the other officers. He is also empowered to appoint such committees as may be necessary.

The vice president shall take charge of the meetings and duties of the president when necessitated by absence. The vice president shall act as program chairman.

The secretary-treasurer shall keep the minutes, attend to correspondence, and handle such financial matters as may be required.

ARTICLE VII (Meetings): Second Thursday of the months of January, April and September.

ARTICLE VIII (Rules for Governing Meetings): All meetings shall be governed by Roberts Rules of Order Revised.

ARTICLE IX (By-Laws Amendments): Amendments may be added by a two-thirds (2/3) majority vote of those present at a meeting.

ARTICLE X (Rules of Order of Meeting): (1) the minutes of the preceding meeting and business, (2) program, and (3) adjournment.

In January the following officers were elected for 1949: C. Harlan Johnston, M.D., president; James B. Fraser, M.D., vice president; and V. L. Schlaser, M.D., re-elected secretary-treasurer.

This is believed to be the first organization of its kind. One of the objectives which is hoped to be attained is a closer and more cooperative relationship with the home office medical directors. In fact, during the organizational period, Dr. A. L. Johann, medical director of the Bankers Life Insurance Company, Dr. R. R. Simmons, medical director of the Equitable Life Insurance Company of Iowa, and Dr. L. K. Meredith, medical director of the National Life Insurance Company, gave unstintingly of their time and ability to help this infant association. The fact that these local home office medical directors so generously gave their assistance indicates the desire for and need of improved insurance medical examining.

In the meetings of the past year there have been a number of talks, followed by discussions, on topics relevant to the field of physical examinations. Among other subjects were those pertaining to the problems of the examining doctors with the local agents as well as the home offices. In case this subject has never been given any consideration, there are problems that can test the judgment of a Solomon. The attempt to solve these problems is the only purpose for which the association exists, namely—to improve physicians as insurance medical examiners.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ATLAS OF PERIPHERAL NERVE INJURIES—By William R. Lyons, Ph.D., Associate Professor of Anatomy, University of California Medical School; and BARNES WOODHALL, M.D., Professor of Neurosurgery, Duke Medical School, Durham, N. C. W. B. Saunders Co., Philadelphia and London, 1949. Price \$16.00.

CRITICAL STUDIES IN NEUROLOGY—By F. M. R. Walshe, M.D., F.R.S., F.R.C.P., Fellow of the Royal College of Physicians, London; Physician to University College Hospital; Physician to the National Hospital for Nervous Diseases, Queen Square; Fellow of University College, London. The Williams and Wilkins Co., Baltimore, 1948. Price \$4.50.

CURRENT THERAPY 1949; Latest Approved Methods of Treatment for the Practicing Physician—By Howard F. Conn, M.D., Editor. Consulting Editors: M. EDWARD DAVIS, VINCENT J. DERBES, GARFIELD G. DUNCAN, HUGH J. JEWETT, WILLIAM J. KEIR, PERRIN H. LONG, H. HOUSTON MERRITT, PAUL A. O'LEARY, WALTER L. PALMER, HOBART A. REIMANN, CYRUS C. STURGIS, ROBERT H. WILLIAMS. W. B. Saunders Co., Philadelphia and London, 1949. Price \$10.00.

DOCTORS OF INFAMY; The Story of the Nazi Medical Crimes—By Alexander Mitscherlich, M.D., Head of the German Medical Commission to Military Tribunal No. 1, Nuremberg; and FRED MIELKE. Translated by HEINZ NORDEN. With Statements by ANDREW C. IVY, M.D., Vice-President, University of Illinois; Medical Scientific Consultant to the Prosecution, Military Tribunal No. 1, Nuremberg; and TELFORD TAYLOR, Brigadier General, U. S. Army, Chief of Counsel for War Crimes; and LEO ALEXANDER, M.D., Psychiatrist, Consultant to the Secretary of War and to the Chief of Counsel for War Crimes. A Note on Medical Ethics by ALBERT DEUTSCH (Including the New Hippocratic Oath of the World Medical Association). Henry Schuman, New York, 1949. Price \$3.00.

HANDBOOK OF DISEASES OF THE SKIN—By Richard L. Sutton, M.D., Emeritus Professor of Dermatology and

Syphilology, University of Kansas Medical School; and RICHARD L. SUTTON, JR., M.D., Associate Professor of Dermatology and Syphilology, University of Kansas Medical School. The C. V. Mosby Co., St. Louis, 1949. Price \$12.50.

IN THE NAME OF HUMANITY—By Joseph Lewis. Eugenics Publishing Co., Inc., New York, 1949. Price \$2.00.

PRACTICAL ASPECTS OF THYROID DISEASE—By George Crile, Jr., M.D., F.A.C.S., Department of Surgery, Cleveland Clinic. W. B. Saunders Co., Philadelphia and London, 1949. Price \$6.00.

SURGERY OF THE HAND—By Sterling Bunnell, M.D., Honorary Member of American Academy of Orthopedic Surgeons; Member of American Surgical Association, American Association of Plastic Surgeons, American Society of Plastic and Reconstructive Surgery, American Association for the Surgery of Trauma and American Society for Surgery of the Hand; Consultant in Hand Surgery to the Surgeon General; Licentiate of American Board of General Surgery and Plastic Surgery; Corresponding Member of British Orthopedic Association. Second Edition. J. B. Lippincott Co., Philadelphia, 1948. Price \$16.00.

1948 YEAR BOOK OF GENERAL THERAPEUTICS—Edited by Oscar W. Bethea, Ph.M., M.D., F.A.C.P., Professor of Clinical Medicine, Tulane University School of Medicine (retired); Senior in Medicine, Southern Baptist Hospital; Consulting Physician, Charity Hospital; Member of the Revision Committee of the U. S. Pharmacopeia 1930-1940. The Year Book Publishers, Inc., Chicago, 1949. Price \$4.25.

1948 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY—Edited by J. P. Greenhill, B.S., M.D., F.A.C.S., Professor of Gynecology, Cook County Graduate School of Medicine; Attending Gynecologist, Cook County Hospital; Attending Obstetrician and Gynecologist, Michael Reese Hospital; Associate Staff, Chicago Lying-In Hospital. The Year Book Publishers, Inc., Chicago, 1949. Price \$4.50.

BOOK REVIEWS

GENERAL ENDOCRINOLOGY

By C. Donnell Turner, Ph.D., Associate Professor of Zoology at Northwestern University. W. B. Saunders Company, Philadelphia, 1948.

If one is interested in endocrinology from a biologic or experimental viewpoint, he should by all means have a copy of *General Endocrinology* in his library. Written primarily for students concentrating on experimental biology, rather than for the advanced investigator or practicing physician, it nevertheless has many admirable qualities that would help the physician understand basic endocrine physiology.

Starting originally as lecture notes for an undergraduate course in endocrinology for general college students, more and more material was added over a 10 year period until at the present time it has become a well organized textbook of 600 pages. Beginning with an introductory chapter on the scope and history of endocrinology, including a discussion of reciprocal endocrine interactions, the author continues in his second chapter to discuss the biology of secretions. Then chapters follow on the individual endocrine organs—thyroid, parathyroid, pancreas, adrenal and sex organs. Physiology and chemistry of the hormones in relation to metabolism

is thoroughly and clearly discussed. A separate chapter on the biology of sex and reproduction is especially noteworthy. The pituitary gland is discussed last in an effort to show the many interrelationships between that gland and the other endocrine organs. The final chapter is devoted to endocrine mechanisms in the invertebrates.

Throughout the book, the author has presented as clear-cut an understanding of the material as possible in view of the many conflicting views and opinions in the literature. The discussions are basic, and good reviews of physiology are present throughout the book. Emphasis is placed on comparative endocrinology, i.e., the functions of the ductless glands in lower vertebrates and higher invertebrates. One of the most valuable features, especially of interest to the physician, is the excellent bibliography at the end of each chapter. In the chapter on the adrenal glands alone 197 references are listed, and well over 100 references are given in each chapter.

In conclusion, the book is an excellent one on endocrine physiology and metabolism and should be valuable to the physician as a basic science text. It is not intended to discuss clinical aspects, such as treatment and medical differential diagnosis, these subjects being adequately covered in the more advanced medical texts.

B. I. K.

A. M. A. INTERNS' MANUAL

W. B. Saunders Company, Philadelphia,
1948. Price \$2.25.

This valuable little book is now compiled and edited in the office of the Council on Pharmacy and Chemistry of the American Medical Association. After a general discussion of internships and residencies, the major part of the volume concerns itself with clinical and laboratory data, drug administration, materia medica, diagnosis and treatment of acute poisoning, diet and nutrition, and physical medicine.

The legal aspects of intern practice are discussed in a short chapter prepared by the Bureau of Legal Medicine and Legislation. A concluding chapter describes the organization and functions of the various divisions of the A. M. A.

The volume seems to contain much useful concise information and should be made available to interns and attending physicians in all hospitals.

R. F. B.

PRACTICAL CLINICAL PSYCHIATRY

By Edward A. Streckler, A.B., A.M., Sc.D., Litt.D., LL.D., M.D., Professor of Psychiatry, University of Pennsylvania School of Medicine; FRANKLIN G. EBAUGH, A.B., M.D., Professor of Psychiatry, University of Colorado School of Medicine; Director, Colorado Psychopathic Hospital; and JACK R. EWALT, M.D., Professor of Neuro-Psychiatry, University of Texas; Director, Galveston State Psychopathic Hospital, University of Texas Medical Branch. Section on Psychopathologic Problems of Childhood by LEO KANNER, M.D., Associate Professor of Psychiatry, John Hopkins University School of Medicine. Sixth Edition. The Blakiston Co., Philadelphia, 1947. Price, \$5.00.

The sixth edition of this text book is practically a rewritten text, in which new information and data, combined with a complete reorganization of material previously presented, makes it one of the most highly recommended books for students and practitioners of medicine. Classification of mental disorders is more adequately treated, and the nomenclature used by the various services is included. Traumatic reactions are well explained, and helpful hints in medico-legal problems are given. New chapters have been added on psychosomatic medicine and pathologic drinking, both of which are well worth reading. The chapter on psychoneuroses stresses a combination of individual treatment and environmental changes, with added emphasis upon the doctor-patient relationship. Dr. Kanner's excellent chapter on problems of children is included with minor revisions. This book is a valuable addition to the library of any practitioner who encounters mental and emotional problems in his practice.

H. C. M.

CLINICAL MANAGEMENT OF VARICOSE VEINS

By David Woolfork Barrow, M.D., Lexington, Ky. Foreword by Arthur W. Allen, M.D., Boston, Mass. Paul B. Hoeber, Inc., New York, 1948. Price, \$5.00.

The author treats the subject of varicose veins and their management in an intelligent and practical way. The normal anatomy and the more frequent anomalies are discussed in detail. The normal and abnormal physiology of circulation in the lower extremities is presented because of its importance in explaining theories regarding the pathogenesis of varicose veins. A complete chapter is devoted to methods of diagnosis of the different types of incompetent veins. The remainder of the book presents the methods of medical and surgical management of varicose veins and complications in such a manner as to compare the efficacy of each one.

The book should be of interest to anyone who plans to treat varicosities.

R. J.

PRURITUS ANI

By Charles John Drueck, M.D., F.A.C.S., Attending Surgeon (Rectal), Chicago Memorial Hospital, Illinois Masonic Hospital; Formerly Professor of Rectal Diseases, Post Graduate Hospital and Medical School, Chicago; Author of *Fistula of the Anus and Rectum*; Editor of *Proctology*. Medical Observer Press, Chicago, 1938.

This most interesting subject is given an extensive coverage by the author. Following a complete review of the anatomy and physiology of the anus and rectum, the pathology of pruritus ani is completely covered. The underlying causative factors are divided into systemic, neurogenic, endocrine, external irritant, and dermatologic factors, and infections of the perianal skin. Anorectal factors are grouped, and genitourinary factors are ably discussed, as are inflammatory lesions.

Treatment as described by the author does not attempt to cure with any "shot-gun" methods or remedies. Where each possible cause is covered, the treatment for the correction of this cause is given. No mention is made, probably attributable to the date of publication, of the use of antihistamine drugs in tablet or ointment form in the treatment of allergic pruritus. This will doubtless be included in the next edition. Also, since publication, several pharmaceutical houses have introduced some good anaesthetics in oil, which do seem to have a place in the treatment when they are properly employed.

The handiness of the two separate indexes was greatly appreciated.

C. H. J.

VIRUS DISEASES OF MAN

By C. E. van Rooyen, M.D., D.Sc. (Edin.), M.R.C.P. (Lond.), Research Member and Professor of Virus Infections, Connaught Medical Research Laboratories and School of Hygiene, University of Toronto; Formerly Sir Halley Stewart Research Fellow, and Lecturer in Bacteriology, University of Edinburgh; and A. J. RHODES, M.D., F.R.C.P. (Edin.), Research Associate and Associate Professor of Virus Infections, Connaught Medical Research Laboratories and School of Hygiene, University of Toronto; Consultant in Virus Infections, Hospital for Sick Children, Toronto; Formerly Lecturer in Bacteriology, University of Edinburgh and London School of Hygiene and Tropical Medicine, University of London. Thomas Nelson & Sons, New York, 1948. Price \$22.50.

In the preface to this second edition of *Virus Diseases of Man*, van Rooyen and Rhodes remark: "Today it is probable that virus diseases as a group occupy a more important position in human and veterinary medicine, than do those of bacterial origin. This fact was demonstrated during the recent war when infective hepatitis, serum jaundice, jaundice associated with yellow fever vaccination, pneumonitis, influenzal diseases, epidemic keratoconjunctivitis, dengue and sandfly fevers, poliomyelitis, and smallpox accounted for much disability over wide areas of the world."

The stated purpose of the 1,202 page volume is to provide a work of reference for both the laboratory worker and the clinician interested in the field of human and animal virus infections. An excellent chapter on technic concerns itself with such subjects as microscopic examination of elementary bodies, the electron microscope, statistical methods in virus studies, inclusion bodies, serologic technic, and the use of the fertile egg in the study of viruses.

Thereafter, virus infections are discussed in the following arbitrary order: skin diseases, infective fevers, tropical diseases, respiratory diseases, eye diseases, and diseases of the nervous system.

This volume is an outstanding reference work and contains much material of interest and importance to the physician.

R. F. B.

DIABETIC MANUAL FOR THE DOCTOR AND PATIENT

By Elliott P. Joslin, M.D., Sc.D., Clinical Professor of Medicine, Emeritus, Harvard Medical School; Medical Director, George F. Baker Clinic at New England Deaconess Hospital; Consulting Physician, Boston City Hospital, Boston, Mass. Eighth Edition. Lea and Febiger, Philadelphia, 1948. Price \$2.50.

This is the eighth edition of Dr. Joslin's diabetic manual, which has become almost a classic for the

diabetic patient and the physician who cares for the diabetic. The introduction includes many of his experiences with thousands of diabetics. Next comes a question and answer section, which deals with many of the inquiries which diabetics frequently make. One chapter deals with the dietary problems of the diabetic and gives an easy method of figuring diets according to Joslin's method. Other chapters deal with the hygiene, complications, surgical problems, and infections in relation to diabetes. Perhaps the most pertinent chapter is the one on prevention of diabetes. Joslin says that perhaps we are going into the Golden Age of diabetes, wherein a cure may be developed. There are many illustrations throughout. This book should be read and re-read by doctors as well as diabetics, because as Joslin so aptly says, "it is the smart diabetic who lives long and the ignorant or careless who dies early."

E. B. W.

VETERINARY CLINICAL PARASITOLOGY

By Edward A. Benbrook, V.M.D., Professor and Head of the Department of Veterinary Pathology, Iowa State College; and MARGARET W. SLOSS, B.S., D.V.M., M.S., Assistant Professor of Veterinary Pathology, Iowa State College. The Iowa State College Press, Ames, Iowa, 1948. Price \$4.50.

This manual on *Veterinary Clinical Parasitology* is a publication of the Iowa State College Press. It deals primarily with the parasites of domestic animals; however, a short section deals with the common intestinal parasites of man. The authors recognize the value of visual aid in teaching, and much of this manual's value lies in the fact that approximately two-thirds of the manual is composed of excellent photographs or illustrations. The manual is divided into three sections. The first deals with parasites of the gastrointestinal tract and methods used in their detection. The second is concerned with the classification, methods used in obtaining, and the identification of mites. The third section deals with lice.

The technic of the flotation method for detection of ova of parasites of the gastrointestinal tract and the methods for obtaining lice and mites are clearly illustrated by photographs. Those of us who have only a casual acquaintance with parasitology and depend upon pictures for the identification by comparison will appreciate the excellent low and high power photomicrographs of ova. The photographs of the pseudoparasites are also of special value to the novice. For a manual of its size the bibliography is very extensive.

As stated in the preface the purpose of the manual is "to assist in the diagnosis of parasitism and of parasitic disease by means of laboratory technics." This purpose is achieved in an admirable manner.

T. M.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. ALLAN G. FELTER, Van Meter

President-elect—MRS. ROGER M. MINKEL, Fort Dodge

Secretary—MRS. CHARLES T. MAXWELL, Sioux City

Treasurer—MRS. M. A. ROYAL, 1138 Thirty-seventh Street, Des Moines 11

NURSE RECRUITMENT

The time has come again for nurse recruitment programs.

Last year doctors' wives were very successful in recruiting student nurses where nurse recruitment programs were given. Talks by student and graduate nurses were delivered to high school girls. Literature and a 10 minute sound film depicting the life of a student nurse and the advantages of nurses' training were presented.

We should continue our student nurse recruitment again this spring. For literature and other information to help with a nurse recruitment program, write to:

Mrs. H. W. Smith
Woodward, Iowa

LEST WE FORGET

In all the hustle and bustle of bringing our Auxiliary year to a close, let us not forget that we have a real obligation to fulfill. Two fine girls, one at Iowa Lutheran in her second year, and the other a freshman at Iowa Methodist, are depending upon us to help them finish their nurses' training. We cannot let them down.

As most of you know, our Loan Fund is just starting to function; these girls are the first to use it, and at present it is rather depleted. We have had other requests during the past year but were unable to fill them because of lack of funds, and our own Mrs. Fred Wells of the Iowa Federation Loan Committee has come to the rescue. With the demand for nurses so great, it behooves us as doctors' wives to do all we can to interest girls in nursing and help those who cannot do it alone.

One year ago your State Board of Directors voted to ask each auxiliary to be responsible for 50 cents per member to keep our fund growing and usable until girls started to pay back into it. So far this year many auxiliaries have failed to send their contributions. We are anxious to have them before state meeting and our new year begins.

Will you include in your plans for next year at least one project to earn money for this fund? Possibly some organization in your community would be happy to contribute to such a worthy cause. If a friend or neighbor has passed away during the year, give a living memorial by donating to our

fund. Recognition of such a gift will be sent to the family by the Auxiliary.

Please let us hear from you soon.

Mrs. W. R. Hornaday
Chairman of the Nurses
Loan Fund

THE NURSE SHORTAGE AND YOUR AUXILIARY

Has your Auxiliary contributed 50¢ per member to the Student Loan Fund?

Has your Auxiliary conducted a Nurse Recruitment program in the schools?

These are two of the major projects of the State Auxiliary. Is your Auxiliary doing its share? The nurse shortage is still acute.

Mrs. A. G. Felter

Auxiliary to Iowa State Medical Society
Van Meter, Iowa

Dear Mrs. Felter:

We wish to take this means to thank you and all the members of the Auxiliary for the splendid work that they have done for us, and the making of the survey during the summer and fall, and also for the very great assistance and cooperation with the Recruitment Campaign.

The Iowa State Nurses' Association greatly appreciate this.

Yours very truly,
Jessie P. Norelius, R.N.
Executive Secretary, I.S.N.A.

MEMO TO COUNTY PRESIDENTS

Mrs. Felter, our state president, requested annual reports from county presidents by April 1. Have you made yours?

ACTIVITIES OF COUNTY AUXILIARIES

Polk County

Polk County Auxiliary is giving Oscar Ewing a run for his money in his fight for compulsory health insurance. We have mobilized our Auxiliary to inform groups (and individuals) to distribute pamphlets, and to contact laymen and interest them in sending telegrams or writing letters to Congressmen.

The enthusiastic response to the educational program of the Iowa State Medical Society has been most satisfying. On February 23 a meeting was called for those particularly interested in speaking before groups. A panel discussion was presented to help these women understand the true meaning of the proposed legislation S. 5 and H.R. 783. The panel was composed of Mr. Donald Taylor, field secretary of the Iowa State Medical Society, Mr. Wilbur R. Quinn, executive director of Iowa Medical Service, and Mr. Edwin Kingery, executive secretary of the Polk County Medical Society, with Dr. Allan B. Phillips, secretary of the Iowa State Medical Society, serving as moderator.

On February 25 Dr. Fred Sternagel, president of Polk County Medical Society, presented an excellent paper on "Socialized Medicine." He was followed by Mr. Don Taylor, who gave detailed information on the Blue Shield of Iowa. This was the largest Polk County Auxiliary meeting ever held in Des Moines.

As a result of these two meetings our members have shown a new and determined spirit to enter into the campaign against compulsory insurance in Polk County.

We have distributed 70,000 pamphlets to industrial plants, hotels, small businesses, hospitals, libraries and retail stores. Many auxiliary members even helped fold the pamphlets as well as distribute them. We are still in the process of reaching outlying companies. *Many of the employers whom we contacted enclosed pamphlets in their employees' pay envelopes.* This is the most successful way to reach the worker and his family.

Our members are speaking before P.T.A. groups, study groups, social groups and church organizations. We have succeeded in interesting some large groups, such as hospital guilds and other auxiliaries, in obtaining speakers through the Speakers Bureau of the Iowa State Medical Society.

The telegram committee is making calls and offering to send telegrams for parties interested in denouncing S. 5 and H.R. 783 (charging messages to telephone number of sender, of course). To date 105 telegrams have been sent and acknowledged.

All Polk County Auxiliary members are urging all with whom they come in contact to write personal letters to their congressmen, protesting the legislation. All letters written to Hon. Bourke Hickenlooper (Senator), Hon. Guy Gillette (Senator) and Mr. Paul Cunningham (Representative of 5th District) have been answered promptly.

Radio interviews over local stations are being scheduled with members who are working on this project (so that this information will reach more ears).

With the fine cooperation of our members and the help of central office personnel, we hope to continue this fight and show Oscar that Iowa is on the map.

Mrs. L. K. Shepherd and
Mrs. A. B. Phillips, Chairmen
Public Relations Committee

WEBSTER COUNTY MEDICAL AUXILIARY

Webster County Medical Auxiliary held a dinner meeting February 24, at Hotel Warden, Fort Dodge.

Mrs. Coughlan read a copy of a letter which had been sent to Senator Paul McCarville regarding the Basic Science Law and the possibility of its repeal, and his reply to it. It was decided that each member of the auxiliary should write an individual letter in protest of repeal of the Basic Science Law, as well as having our secretary, Mrs. Acher, write a similar letter for the society as a whole.

The secretary read communications, among which were several letters of appreciation of the tea which the Webster County Medical Auxiliary gave October 15, complimenting the nurses during their state convention in Fort Dodge. Approximately 350 nurses attended.

Mrs. Roger Minkel, president-elect of the state auxiliary, reported on the convention held in Chicago last fall and enlightened us on the dangers of federalized medicine which were brought out at the convention. She stressed that all of us should acquaint ourselves with the facts and make every effort to combat the trends of socialized medicine in our own community.

Webster County Medical Auxiliary lost one of its devoted members of long standing in the passing of Mrs. C. J. Saunders, who died following a short illness of this past month.

Mrs. Charles J. Baker

PUBLIC RELATIONS AT WORK

At the request of Mrs. J. E. Whitmire, Sumner, state chairman of public relations, a meeting was held at the Hotel Savery, March 2. The following women attended: Mrs. A. G. Felter, Van Meter; Mrs. Fred Moore, Des Moines; Mrs. R. M. Minkel, Fort Dodge; Mrs. E. B. Dawson, Fort Dodge; Mrs. C. H. Coughlan, Fort Dodge; Mrs. M. G. Beddoes, Oelwein; Mrs. H. W. Smith, Woodward; Mrs. E. F. Ritter, Centerville; Mrs. J. F. Loeck, Independence; Mrs. R. L. Knipfer, Jessup; Mrs. Edward Rohlf, Waterloo; Mrs. James Reeder, Sioux City; Mrs. D. F. Rodawig, Spirit Lake; Mrs. M. G. Bourne, Algona; Mrs. G. A. Paschal, Webster City; Mrs. C. H. Mitchell, Indianola; Mrs. Matt Ware, West Branch; and Mrs. A. W. Bennett, Iowa City. Luncheon was a courtesy of the Iowa State Medical Society.

Mr. Donald Taylor, field secretary, Iowa State Medical Society, gave a most informative talk on state medicine. Mr. Wilbur Quinn, executive director, Iowa Medical Service, discussed the Blue Shield voluntary health insurance, its plan and function.

The purpose of the meeting was to inform doctors' wives so they may speak with authority on and answer questions in regard to state medicine and voluntary insurance. All who attended were given material to take home with them. Any auxiliary wishing to obtain material to distribute may secure it from the office of the Iowa State Medical Society,

505 Bankers Trust Building, Des Moines. There are pamphlets available, which should be placed in drug stores, grocery stores, beauty parlors and any place of business where the public may see and read. Doctors wives are specifically assigned to this undertaking. The public must be informed.

Mr. Taylor suggests that only one person from a group be designated to write for material in order to simplify distribution. Members-at-large are requested to write for material to distribute in their areas.

The public relations committee has arranged for Mr. Taylor to present the subject of state medicine at a luncheon of the Republican Women at the Hotel Fort Des Moines on March 8. P.T.A. groups, women's clubs and other lay organizations should have the topic presented by a doctor in their own area where possible.

CONGRESSIONAL NOTES ON MEDICINE

Utah Is the Fourth State to Petition Congress

The United States Senate and House of Representatives received on February 22 a Resolution from the Utah State Senate. Congress was memorialized not to enact legislation providing for socialized medicine or national compulsory health insurance and urged that legislation be restricted to measures which will encourage private health insurance in cooperation with the private practice of medicine.

S. Con. Res. 17. Research on the Familial Aspects of Chronic Illness. By Mr. Tydings, of Maryland, February 10. Resolution states that it is the sense of the Congress that research on the familial aspects of chronic illness and investigation of practical methods of furnishing family health services should be expanded and intensified, and that the United States Public Health Service should extend its activities toward this end. Referred to the Committee on Labor and Public Welfare.

Comment: Identical with H. Con. Res. 29, reported in Bulletin No. 6. It will be of interest to read the announcement carried in the A.M.A. Journal of February 26 that Dr. James R. Miller heads a committee that will undertake a study of problems related to the chronically ill. Also, the Press announcement of an address made by Dr. Scheele, Surgeon General of the Public Health Service, in Boston on this subject.

H. R. 2893. Social Security Amendments of 1949. By Mr. Doughton, of North Carolina, February 21. To extend and improve the old age and survivors insurance system, to add protection against disability, and for other purposes. Referred to the Committee on Ways and Means.

Comment: This is an administration bill which extends old age retirement and survivors insurance to 20,000,000 more persons, such as farmers, self-employed (including physicians), etc. Increases insurance allowances to beneficiaries and outlines a

system of disability insurance. Raises contributions to 2 per cent from both employer and employee by Jan. 1, 1950. This bill will be the subject of a Comment Bulletin at a later date.

H. R. 2751. National Science Foundation. By Mr. Biemiller, of Wisconsin, February 15. To promote the progress of science to advance the national health, prosperity and welfare; to secure the national defense; and for other purposes. Referred to the Committee on Interstate and Foreign Commerce.

Comment: Follows pattern of S. 247, reported in Bulletin No. 2. However, this bill spells out in detail composition and duties of an executive committee. S. 247 reported by the Senate Committee on Labor and Public Welfare February 25.

Magnuson Program for Nation-wide Medical Care

Dr. Paul B. Magnuson, chief medical director of the Veterans Administration, submitted to the Press a plan which he personally devised for nation-wide medical care based on principle of local control. He recommends generally the establishment of diagnostic clinics and mobile examination units to travel sparsely populated areas on a pay-as-you-can-afford basis with Federal subsidy. If this plan is translated into legislation, it will be reported in this Bulletin.

Joe S. Lawrence, M.D., Director
Washington Office
A.M.A.
Bulletin No. 7

NATIONAL MEETING

A few more months, and the members of the Woman's Auxiliary to the American Medical Association will be arriving in Atlantic City, N. J., for their annual convention, June 6 to 10. Have you made your reservations? If not, send your request *at once* to Dr. Robert A. Bradley, Chairman, Subcommittee on Hotels, 16 Central Pier, Atlantic City, N. J.

PROGRAM OF THE AMERICAN MEDICAL ASSOCIATION FOR THE ADVANCEMENT OF MEDICINE AND PUBLIC HEALTH

A Federal Department of Health

1. Creation of a Federal Department of Health of Cabinet status with a secretary who is a doctor of medicine, and the coordination and integration of all federal health activities under this department, except for the military activities of the medical services of the armed forces.

Medical Research

2. Promotion of medical research through a National Science Foundation, with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.

Voluntary Insurance

3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas. Aid through the states to the indigent and medically indigent by the utilization of voluntary hospital and medical care plans with local administration and local determination of needs.

Medical Care Authority With Consumer Representation

4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.

New Facilities

5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas in which the need can be shown and with local administration and control as provided by the National Hospital Survey and Construction Act or by suitable private agencies.

Public Health

6. Establishment of local public health units and services and incorporation in health centers and local public health units of such services as communicable disease control, vital statistics, environmental sanitation, control of venereal diseases, maternal and child hygiene and public health laboratory services. Remuneration of health officials commensurate with their responsibility.

Mental Hygiene

7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.

Health Education

8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.

Chronic Diseases and the Aged

9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.

Veterans' Medical Care

10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care, including care of the veteran in his own community by a physician of his own choice.

Industrial Medicine

11. Greater emphasis on the program of industrial medicine, with increased safeguards against industrial hazards and prevention of accidents occurring on the highway, home and on the farm.

Medical Education and Personnel

12. Adequate support with funds free from political control, domination and regulation of the medi-

cal, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

LOCAL RESOLUTIONS

The following resolutions in regard to socialized medicine and state legislation will be of interest to county medical societies and auxiliaries as a suggestion for adoption and action in their own communities.

Resolution Opposing Compulsory National Health Insurance

Be It Resolved, that the legislative committee of the Mason City Chamber of Commerce is opposed to the adoption by Congress of any compulsory national health insurance program for the reason that the present voluntary prepayment medical plan can do all that a compulsory plan could do, and do it better, and for the further reason that the present level of medical care in this country is higher than anywhere else in the world. The committee feels that the adoption of a compulsory plan would be far more expensive in the end and far less efficient, in that it would entail interference by government bureaus, which have already shown themselves to be grossly inefficient in connection with medical matters. It is further the feeling of this committee that, if the government wishes to enter the medical field, it can very properly enter the field of preventive medicine, particularly in the education of the public to make use of the facilities they now have.

Resolution Against Repeal of Iowa Basic Science Law

Be It Resolved, that the legislative committee of the Mason City Chamber of Commerce is in favor of retaining the present Basic Science Law in Iowa, and that it is opposed to the repeal of the law for the reason that it would be contrary to the trend everywhere. It is the feeling of the committee that, if there is to be a revision of the basic science law in the state, it should be upward, in line with general educational trends and developments, and not downward.

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Tuesday at 11:30 a.m.

WOI—Thursday at 11:15 a.m.

April 5-7 Treatment of Deafness by Radium

Francis P. Quinn, M.D., Dubuque

April 12-14 Tetanus

Lyle F. Frink, M.D., Spencer

April 19-21 How Goes the Fight on Cancer?

Edmund G. Zimmerer, M.D.,

Des Moines

April 26-28 Cancer of the Skin

Richard J. Steves, M.D.,

Des Moines

SOCIETY PROCEEDINGS

MEETINGS

Black Hawk

The regular dinner meeting of the Black Hawk County Medical Society was held March 15 at the Elks Club in Waterloo. Dr. J. Rudolph Schenken, Professor of Pathology, University of Nebraska College of Medicine, spoke on "Thrombocytopenic Purpura" and Dr. Harold C. Lueth, Dean and Professor of Medicine, University of Nebraska College of Medicine, on "Changing Objectives of Medical Education."

Cerro Gordo

The February meeting of the Cerro Gordo County Medical Society was held February 8 at the Hotel Hanford, Mason City. Dr. Paul T. Cash, Des Moines, presented an address on the subject, "Psychiatry in General Practice."

Dr. F. E. Thornton, Des Moines, spoke March 8 at the dinner meeting of the Cerro Gordo County Medical Society on the topic of "Medical Problems of Low Back Pains," illustrating his discussion with lantern slides.

Dallas-Guthrie

The Dallas-Guthrie Medical Society met March 17 with the Woman's Auxiliary at Perry. Dr. Ralph Dorner, Des Moines, was guest speaker, addressing the group on the subject, "Chest Surgery."

Davis

The Davis County Medical Society was host to the Appanoose, Wapello and Van Buren County Medical Societies at a dinner and program held February 15 in Bloomfield. Dr. Richard Schoonover was in charge of the program for the evening.

Jasper

Newly elected officers of the Jasper County Medical Society are Dr. J. W. Ferguson, president; Dr. P. L. Spencer, vice president; and Dr. J. R. Singer, secretary-treasurer. Dr. J. C. Hill was named delegate and Dr. J. W. Billingsley, alternate.

Johnson

Dr. William B. Bean, Professor and Head of the Department of Medicine at the College of Medicine, State University of Iowa, was the leading speaker on an open discussion of "Vitamins, Fact and Fallacy" at the regular dinner meeting of the Johnson County Medical Society, held March 2 at the Jefferson Hotel, Iowa City.

Harrison

At a dinner meeting of the Harrison County Medical Society held February 24 in Logan, the following officers were elected: Dr. C. A. Walvoord, president;

Dr. Hans Hansen, secretary-treasurer; Dr. F. X. Tamisiea was named delegate and Dr. F. G. Sarff, alternate. Subjects of discussion at the meeting were (1) the relation of the doctors to their patients and to society, (2) state compulsory health insurance, and (3) prevailing illness in the community and measures taken or to be taken.

Linn

Dr. Richard B. Cattell, Boston, Mass., will address the Linn County Medical Society April 18 on the subject, "Management of Hyperthyroidism." Discussion will be given by Dr. Lester Powell, Des Moines, and Dr. Clyde Meffert, Cedar Rapids.

Osceola

The Osceola County Medical Society met with the Woman's Auxiliary for dinner on March 7 in Sibley.

Polk

Dr. Dwight E. Harken, Assistant Professor of Surgery at Harvard Medical School and Tufts College Medical School, addressed the Polk County Medical Society on "New Horizons in Heart Surgery" at a dinner meeting February 16 at the Des Moines Club.

At the March 16 dinner meeting, Dr. Alfred W. Adson, Professor of Neurosurgery, Mayo Foundation, and Senior Neurosurgeon, Mayo Clinic, Rochester, was the guest speaker, addressing the group on the subject, "Do the American People Want Socialized Medicine?"

Pottawattamie

The Pottawattamie County Medical Society met February 15 at the Hotel Chieftain in Council Bluffs for its monthly dinner meeting. On the program were Hal G. Perrin, Administrator of the Clarkson Memorial Hospital, Omaha, discussing "Rising Hospital Costs"; Wilbur R. Quinn, Des Moines, Executive Director of Iowa Medical Service, speaking on the "Blue Shield Plan"; and Donald L. Taylor, of Des Moines, Field Secretary of the Iowa State Medical Society, outlining the "Educational Program of the A. M. A."

Scott

Dr. George Crile, Jr., of Cleveland Clinic, Cleveland, Ohio, spoke on "The Present Status of Treatment in Diseases of the Thyroid Gland" at a meeting of the Scott County Medical Society March 1 in Davenport.

Upper Des Moines Valley Medical Society

The Upper Des Moines Valley Medical Society met March 10 at the Tangney Hotel in Spencer for its regular dinner meeting. Dr. Philip Pugh, Sioux

City, spoke on "Character Neurosis" and Dr. Carroll Brown, Sioux City, on "Head Injuries and Sequelae." The medical health program of Iowa Medical Service was discussed by Dr. J. B. Knipe, Armstrong.

Woodbury

Members of the Woodbury County Medical Society were hosts to the Interstate Veterinary Medical Association, and other physicians in the area, at a meeting March 10 in the Mayfair Hotel, Sioux City. "Diagnosis and Treatment of Brucellosis" was the topic discussed by Dr. Norman B. McCullough, Surgeon in the U.S. Public Health Service, and "Brucellosis in Animals and its Public Health Significance" was the subject of I. A. Merchant, D.V.M., Head of the Department of Veterinary Hygiene at Iowa State College.

PERSONALS

Dr. Albin C. Bergstrom has resumed his practice in Missouri Valley after two months in Lincoln, Neb.

Dr. Ivan E. Brown, who has practiced medicine in Forest City for three and a half years, has recently located in Spencer.

Dr. John P. Darling discussed socialized medicine at a meeting of the Mason City Civic League March 1, at the City Hall.

Dr. Charles V. Edwards spoke on "Cancer" to the Ninth District Association of Nurses February 16 in Council Bluffs.

Dr. Harlow J. Fishman recently has become associated in Holstein with Dr. James W. Martin. A native of Cherokee, Dr. Fishman was graduated from the State University of Iowa College of Medicine and interned at Hurley Hospital, Flint, Mich. He served two years with the armed services and has just completed two years and three months of surgery internship as a resident physician at the Veterans' Hospital, Des Moines.

Dr. Russell S. Gerard discussed socialized medicine at a meeting February 23 of the Child Study Club of the Waterloo Central Christian Church.

Dr. Cecil V. Hamilton returned to his home in Garner, March 10, after attending the 1949 Scientific Assembly of the American Academy of General Practice in Cincinnati, Ohio.

Dr. James B. Knipe of Armstrong addressed the Spencer Kiwanis Club March 14 on the topic, "Compulsory Health Insurance."

Dr. Horace M. Kornis discussed heart disease at a meeting February 21 of the Dubuque Kiwanis Club.

Dr. John I. Marker of Davenport was the speaker at the meeting March 2 of the Davenport Kiwanis Club, discussing "Treatment of Mental Diseases in Iowa." Dr. Marker spoke March 14 in Sioux City on "The Advantage of a Mental Health Clinic to City and Community."

Dr. John C. McKitterick discussed socialized medicine at a special board meeting of the Burlington Chamber of Commerce on March 1.

Dr. Stephen F. Nagyfy, since Jan. 1, 1946, Assistant Professor of Obstetrics and Gynecology, State University of Iowa College of Medicine, has resigned to accept a position in Johnson City, N. Y. Dr. Nagyfy will be Chief Consultant in Obstetrics and Gynecology to the Charles S. Wilson Hospital, and Chief Obstetrician and Gynecologist to the Endicott-Johnson clinics, associated with the hospital.

Dr. S. D. Poore has become associated in Villisca with Dr. L. R. Moriarty. Dr. Poore was graduated from the University of Tennessee Medical School in 1946 and interned at St. Luke's Hospital in Chicago. For the past year he has been physician with the Oak Ridge National Laboratories in Tennessee.

Dr. Frederick W. Preston has joined the staff of the Park Hospital Clinic in Mason City. Dr. Preston for the past year has been with the Department of Surgery at the University of Illinois, and on the staff of the Presbyterian and Cook County Hospitals. Prior to that, he was at the Mayo Clinic at Rochester, Minn., for three and a half years. A graduate of Northwestern University Medical School, Dr. Preston served his internship at the Presbyterian Hospital, Chicago, and during the war spent three and a half years in the armed services overseas.

Dr. Norman K. Pullman of Sidney has recently become associated with Drs. M. J. McVay and F. W. Hobart in the McVay Memorial Hospital in Lake City. Dr. Pullman is a graduate of Creighton School of Medicine, Omaha, Neb. Following his internship at St. Joseph's Hospital, Denver, Colo., he served with the medical corps of the U.S. Navy for two years and recently completed a year's residency at the Methodist Hospital, Peoria, Ill.

Dr. John R. Rankin of Keokuk addressed the Lions Club there March 1 on "Socialized Medicine."

Dr. Leslie W. Swanson of Mason City discussed socialized medicine before his fellow Rotarians at the club's luncheon meeting March 7.

Dr. Paul Tempel, a graduate of the State University of Iowa College of Medicine, will locate in Steamboat Rock in April, after completion of his internship at Lutheran Deaconess Hospital in Chicago.

Dr. Edmund J. Tierney of Sioux City spoke on socialized medicine at the Columbia Club luncheon meeting there on February 25.

Dr. Kirsten U. Toverud, Norwegian pediatrician, has been named to direct an extensive research project at the State University of Iowa Hospitals in the relationship of Vitamin K deficiency to brain injury at birth. Dr. Toverud started a health center for mothers and children in a rural district near Oslo, Norway, in 1936, and in 1939 became director of the first municipal health center in that city, which has a death rate figure of 11.7 (as compared to Iowa's 28 to 30) for each 1,000 births.

Dr. Harold F. Trafton of St. Louis has joined the surgical staff of the Cogley Clinic in Council Bluffs. A native of Paris, Ill., and a graduate of the University of Illinois College of Medicine, Dr. Trafton comes from the St. Louis City Hospital, where he was on the surgical staff for five years. In World War II he served as flight surgeon with the air corps.

Dr. Rodney C. Wells of Marshalltown talked on "Immunization" at a meeting of the P.T.A. city council March 7 at the Y.W.C.A.

Dr. Lysle H. Whitmer will soon resume the practice of medicine in Muscatine. Dr. Whitmer, a practicing physician in Wilton before and after service with the U.S. Army Medical Corps, has been retired for 18 months, living on a farm near Bloomfield.

Dr. Keith E. Wilcox of Muscatine was guest speaker on an educational program on "Cancer," which was presented by the Orono Township Farm Bureau on February 17.

Dr. Albert L. Yocum of Chariton was guest speaker in Leon March 9 at one of a series of meetings on the Decatur County program in observation of American Cancer Educational Week. Dr. Edmund G. Zimmerer of Des Moines spoke in Lamoni March 7 in connection with the same program.

Guest speakers for Dubuque's first Health Education Forum held March 15 were Dr. Gleen H. Harvey, Cedar Rapids, discussing "Newer Drugs and Their Uses," and Dr. Edmund G. Zimmerer, Des Moines, "Cancer Control."

New officers of the Fort Dodge Lutheran Hospital Staff, elected at the annual staff dinner and meeting February 17, are Dr. Marvin W. Burleson, president; Dr. W. B. McTaggart, vice president; and Dr. Edson E. Moore, re-elected secretary. Dr. Marshall Jones, Iowa City, guest speaker, discussed the work of the clinical psychologist in the field of child adjustment.

GOLFERS

All golfers attending the Annual Session of the Iowa State Medical Society are urged to be on hand Monday, April 18, 1:00 p. m., at the Des Moines Golf and Country Club. This date precedes the medical meetings. Dinner follows at Club 100. Prizes for many and varied features in golf scores and shots will be awarded. You are urged to take advantage of this day of fun. Notify the president, Dr. Joseph E. Dvorak, Sioux City, of your intentions, as we should know how many will be present for dinner. William H. Gibbon, also of Sioux City, is secretary-treasurer of the golfers this year.

ASSOCIATION OF MEDICAL EXAMINERS NEXT LUNCHEON MEETING

The Association of Medical Examiners extends an invitation to each doctor attending the State Medical Convention to come to its next regular luncheon and meeting, which will be held in the Colonial Room of the Des Moines Club at 12:00 noon on Tuesday, April 19, 1949. Norman J. Barker, M.D., medical director of Connecticut General Life Insurance Company of Hartford, Conn., will be the guest speaker.

If you plan to attend, please notify, not later than 12:00 noon, April 18, either the Polk county Medical Society office (3-0816), the office of the Secretary-Treasurer, Dr. Vern Schlaser (4-0339), or the Convention Headquarters at Hotel Fort Des Moines (3-1161).

DEATH NOTICES

Gasson, James H., 80, of Shenandoah, died March 5 in Iowa Methodist Hospital in Des Moines. A graduate of Creighton University Medical School, Omaha, Dr. Gasson practiced medicine in Villisca, Bedford, Shenandoah and Red Oak. He was a member of the Taylor County and Iowa State Medical Societies.

Stearns, Frederic T., 33, of Osage, died February 17, as a result of injuries suffered in an automobile accident. Born in Osage, Dr. Stearns was graduated from the State University of Iowa College of Medicine in 1942 and interned at City Hospital in Oklahoma City, Okla. He spent a year in resident obstetrics at Johns Hopkins, Baltimore, Md., and since 1946 has been associated in practice with Drs. John O. Eiel and Merrill Eiel. He was a member of the Mitchell County and Iowa State Medical Societies.

Ware, Matt, 65, of West Branch, died February 14 at Mercy Hospital in Iowa City, following an illness of about one month. Dr. Ware was born in Marengo and was graduated from the State University of Iowa College of Medicine in 1912. He practiced for one year in North Liberty, for three years in West Liberty, and since 1917 in West Branch. He was a member of the Johnson County and Iowa State Medical Societies.

COUNTY MEDICAL SOCIETY OFFICERS

COUNTY	PRESIDENT	SECRETARY	DEPUTY COUNCILOR
Adair.....	Ralph DeCicco, Greenfield.....	A. S. Bowers, Orient.....	A. S. Bowers, Orient
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DIAGNOSIS AND SURGICAL TREATMENT OF PULMONARY STENOSIS

Willis J. Potts, M.D., Chicago

The discovery of an effective means of therapy in cases of pulmonary stenosis has stimulated interest in this hitherto hopeless condition. The door was opened to concentrated study of this problem about three years ago when Dr. Blalock successfully made the first anastomosis of one of the large vessels to a pulmonary artery for diversion of blood to the lungs. Since then, interest in blue babies has grown and spread over the country.

The pathology of this condition was not known to many of us before the development of effective surgery. The term tetralogy described by Fallot indicates that there are four variations from normal in these children's hearts. The most important one is stenosis of the pulmonary artery. In fact, it is so important that this disease is often referred to as pulmonary stenosis, rather than the tetralogy of Fallot. Besides this, there is dextroposition of the aorta. It overrides the septum, allowing blood from each ventricle to flow through the aorta. There must be a patent interventricular septum, or the child will almost invariably die at birth because of dilatation of the right ventricle. Fourth, there is hypertrophy of the right ventricle, due to excessive demands on that side of the heart in its attempt to force blood through the small stenotic vessel.

In the typical blue baby the lips are grapejuice blue, the eyes suffused, the fingers blue and clubbed, and the general expression is that of a sad and unhappy child. Many of them have attacks of cyanosis that terminate in unconsciousness; and, because the parents are constantly concerned about each future moment, the children are all badly spoiled. Some children are blue only when active.

The red blood cell count varies from 5,000,000 to 13,000,000 per cc., the average being about 7,500,000. The hemoglobin is correspondingly high, from 18 to 24 gm.; the hematocrit usually is in the sixties.

The most important feature in the symptom complex is limitation of activity. Many of these children cannot walk a step; some can stand; some on good days can walk half a block or a block; some can walk a few blocks, and then, as soon as they hurry, they have to squat. Why they squat in this characteristic position we do not know, but they seem to be more comfortable that way.

The oxygen saturation test of the arterial blood is not of much value, because the child usually fights while the blood is being drawn, and consequently the readings are low.

There is physical and often mental underdevelopment. Many of these children have had a hemiplegia. Thrombosis of the cerebral vessels occurs because the blood is so thick.

With that picture in mind, what does one need to make a diagnosis? In the roentgenogram, we see a boot-shaped heart, concavity at the base of the heart on the left, a blunt left ventricle, and slight enlargement of the right ventricle. The lung fields should be clear in contrast to the cloudiness in patients with patent ductus arteriosus.

In the left anterior oblique position, one looks for an open space, which normally should be occupied by the pulmonary artery. This open space is called the pulmonary window.

Fluoroscopic examination of the chest with well accommodated eyes is essential to make sure that the lung fields are clear.

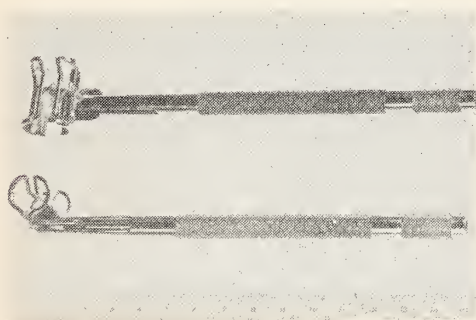
Auscultation of the heart will usually reveal, in the typical case of pulmonary stenosis, a soft short systolic murmur, heard best at the second left interspace. The electrocardiogram tracing is characteristic in children who have tetralogy of Fallot. If it varies much from this pattern, probably the child has one of the many other

deformities. The QRS complex is down in lead I and up in lead III; in other words, the child has a deviation of the axis to the right.

These are the important points, and I would like to sum them up again, because doctors so often ask, "What do I need for a diagnosis?" Red blood cell count and hemoglobin should be elevated. Exercise tolerance should be markedly reduced. The child should have a more or less boot-shaped heart. In the classical case the heart is boot-shape, but sometimes it is practically normal. There must be right axis deviation in the electrocardiogram, and the lung fields must be clear. With these characteristic findings, you can almost be assured that the child falls in the group that can be benefited by surgery.

Having seen the work of Dr. Blalock, who anastomoses the subclavian or innominate artery to one of the pulmonary arteries, we considered the possibility of anastomosing the aorta directly to a pulmonary artery. If this were possible, we could avoid using the innominate vessel, which in about 30 per cent of cases produces cerebral changes because of interference with the blood supply to the brain.

Experimental studies were done on a series of approximately 35 dogs, using a new type of clamp



(Fig. 1) which encircles the aorta and pinches off a segment of the vessel to which the anastomosis is made, but, at the same time, allows a fair portion of the blood to flow through the aorta. Unless some blood constantly flows through the aorta, ischemia of the spinal cord may occur and lead to paralysis of the lower half of the body.

Operative success depends in large measure on two factors, of which the first is accurate diagnosis. Not all children, unfortunately, are remediable by surgery, but about 60 per cent of the blue ones can be operated on. The others have all sorts of unusual deformities of the heart and large vessels, for which nothing can be done to date. One of our most difficult tasks is to tell parents that nothing can be done for their young-

ster. However, we have turned down no child for operation if we could demonstrate that there was insufficient flow of blood to the lungs. Seven of the children we have operated on have been in such bad condition that they had to be in continuous or intermittent oxygen before operation. Oddly enough, and I cannot explain why, all seven of those children have survived surgery.

The second essential is proper anesthesia. The anesthetist must guide that patient along a very narrow ledge of anoxia, and a little push is enough to toss the patient into the brink. Before the operation the battle has been against anoxia. During the operation, with one lung collapsed, it requires the skill of an expert to carry the child through.

The operative procedure will be discussed very briefly. The child is laid on its right side, and, just as for a ductus, we go through the fourth left interspace. It is practically never necessary to resect a rib. Children's ribs are pliable and can easily be spread.

The first thing that is done is to dissect out the pulmonary artery. The size, length, shape and position of the pulmonary artery could be discussed endlessly. None of them are the same. Some are large and some tiny; some are short and some long. The bluer the child, the more the pulmonary is covered with masses of small veins that have enlarged in an attempt to compensate for the inadequate flow of blood to the lungs. These must all be dissected off. Doubly encircling ligatures are placed around the pulmonary artery and its branches and laid aside. Then the aorta is dissected from its bed, and the intercostal vessels on its lateral and inferior surfaces are tied and cut. There are usually three to five. Sometimes as many as ten intercostals have to be ligated. The aortic clamp is applied to pinch off a small lip of the aorta. After the clamp is closed, a finger is placed on the aorta distal to the clamp. If sufficient blood is going through to nourish the spinal column during the operation, one will feel a thrill, which is produced mechanically when fluid goes through a constricted area.

Then the cut is made in the aorta. Originally we made it 5/16 of an inch long or 8 mm. We have shortened it to 4/16 of an inch or 6.3 mm. We try to make it exactly that length and measure each incision with a caliper. In some of the children whom we operated on earlier we made the cut 5/16 of an inch long. Although they had excellent immediate results, we feared too great a strain on their heart and have therefore shortened the opening to 1/4 of an inch.

The ligatures that were previously placed

around the branches of the pulmonary artery are tied to the clamp to produce a bloodless field. A similar sized opening is then cut into the pulmonary artery. The anastomosis is now done with fine silk on a curved, nontraumatic needle, employing a simple continuous over and over stitch. At the completion of the operation, the pulmonary ligatures are taken off first to allow a little blood to come in to occlude the tiny pinpricks and the spaces between the sutures. Then the clamp is slowly removed, and one immediately feels a whirl of blood, now flowing through the newly formed channel.

A de Pezzer catheter drain is inserted from the inside out through the sixth interspace; the lung is expanded; and the chest closed in layers. The child is returned to bed in an oxygen tent, and the catheter is connected to a water seal bottle. For a week, 30,000 units of penicillin are given intramuscularly every three hours.

The results in general have been gratifying. We have now performed 80 aortic pulmonary anastomoses, with a mortality of 10 per cent. Besides these, there have been 13 exploratory operations. One child at operation proved to have an Eisenmenger complex, and the rest had no pulmonary artery, or such a tiny one that an anastomosis was impossible. Of this group five died. If blood cannot be diverted to the lungs, these anoxic children do not tolerate well the temporarily increased anoxia incidental to opening the chest.

The children who survived aortic-pulmonary anastomosis have done well. Their cyanosis has been relieved; they can run and play and attend public school. In all cases, there has been some enlargement of the heart due to the added strain of the newly formed ductus. Two children have marked enlargement of the heart and will likely go into cardiac failure in the next year or two. We always explain to the parents that these children are not, and never will be, normal. The basic pathology in their hearts remains, and to it we have added the strain of pumping blood through a diverting channel. However, the children are happy and carefree, and the parents are relieved of the strain of helplessly watching their children struggle for air.

RITTER'S DISEASE

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Ritter von Rittersheim¹ of Prague reported 297 cases of desquamative dermatitis of the newborn which he collected over a period of 10 years under the title of "Dermatitis Erysipelatosa." The subsequent reports of this disease appear in literature under the title of "Dermatitis Exfoliativa Neonatorum" or "Ritter's Disease."

Ritter's disease is not a rare condition, and the purpose of reporting this case is not to add anything new to the knowledge of it, but to provoke a discussion that might clear up some of the confusion in the differential diagnosis of this disease from other bullous diseases of the newborn.

B. P., a white male infant, was transferred from the hospital nursery to the isolation ward because of extensive desquamation of the skin all over the body. The baby was born prematurely May 19, 1947, after 29 weeks of gestation, weighing 2 pounds 10 ounces. The presentation was breech, and delivery spontaneous. He was placed in an incubator immediately, and oxygen was administered continuously. The father and mother were apparently in good health; the Wassermann tests of both parents were negative. The baby did favorably for 7 days. There were no cyanotic spells; he cried lustily and took his food, which consisted of Olac, very well. There was no vomiting nor diarrhea, and only an initial loss of 3 ounces of weight in the first week. Temperature was maintained between 98 and 99 F. No medication of any kind was given to the baby or to the mother before delivery.

On May 28, the ninth day of life, the nurse noted red patches on both cheeks, which rapidly began to desquamate. This condition spread rapidly to axilla, chest, abdomen and legs.

I was called to see the child on May 29. At that time the baby was cyanotic. A large portion of the epidermis of face, chest, abdomen and legs was desquamated, leaving a red moist surface resembling a second degree burn. Nikolsky's sign was strongly positive (mild friction over apparently uninvolved skin produced easy exfoliation). There was no involvement of the mucosa of the mouth. The eyes were negative. Heart and lungs were apparently negative. The temperature was very low, 93 F. (I believe the temperature fell that low in the process of moving the baby around and applying ointments to the body.) The laboratory report was as follows: blood hemoglobin, 86 per cent; red count,

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4,300,000; white count, 12,000; differential lymphocytes, 80 per cent; polymorphonuclears, 20 per cent. Cultures from the blebs and moist surface of the corium were negative. Oxygen treatment was instituted; heat was applied; and penicillin, 10,000 units every three hours, was ordered. The baby expired about 12 hours later. The temperature before death was up to 98.8. F.

Discussion

The causative factor of Ritter's disease is still a disputed point. Many authors²⁻⁵ believe the staphylococcus albus is the culprit. However, many other observers have reported cases in which no organisms could be found. In the case reported here the culture of the lesions was negative, but perhaps this was due to the fact that penicillin ointment was applied to the lesions before a culture was taken. Wideman⁶ holds the view that there is a fundamental deficiency in the epidermis. Histologic study of the epidermis places the difficulty within the cell layer of the epidermis. The staphylococcus infection is probably secondary. There is no definite evidence, then, that staphylococci are the primary cause. However, the majority of observers consider staphylococcus albus and aureus as the causative agents of Ritter's disease.

The symptoms of this disease are definite. It appears in the first few weeks of life, usually beginning as a localized hyperemia on the face, and spreading rapidly to involve the whole body. Characteristically, there is marked wrinkling of the skin and sheetlike desquamation, leaving red denuded areas of corium. Nikolsky's sign is positive and characteristic. Fever is usually absent, unless complicated by staphylococcic abscesses in the lungs, kidneys and brain. Tichenor⁷ reports a case which at autopsy showed multiple abscesses in the lung. Kendall and Aegerter⁸ found gastric and intestinal ulcers, respectively, as a complication of their cases at autopsy. Neff points out that finding ulcers in this condition is of great interest because of the resemblance of this disease to a second degree burn—second degree burns sometimes show ulcers of the stomach.

The differential diagnosis of Ritter's disease from other bullous diseases of infancy sometimes presents difficulty. Modern authors consider bullous impetigo neonatorum and pemphigus neonatorum one and the same disease, or simply different stages of the same disease. They attribute the clinical variation (such as exudation and desquamation) to the different strains of the etiologic organism, or to the susceptibility of the

host. They base their view on the fact that during an epidemic pemphigus neonatorum may be converted into dermatitis exfoliativa or vice versa.⁹ This, however, can be refuted. It is true that the symptoms of the three conditions overlap, yet it is not definitely proven that they are the same.

Pemphigus is accompanied by constitutional symptoms and involves the mouth, nose, throat, vulva and conjunctiva.

Bullous impetigo chiefly affects the face and is characterized by golden yellow crusts, with little desquamation.

Leiner's disease, or erythroderma desquamativa, appears first on the buttocks and gluteal folds. Nikolsky's sign is absent.

Bullous syphilides seen in infants appears chiefly on the palms and soles. Serology and x-ray examination of long bones will establish a diagnosis.

Epidermolysis bullosa is a rare congenital disease in which slight traumatism causes the formation of bullae. It runs in families. The lesion appears on the parts exposed to friction or pressure; even the nails and scalp may be affected. It is characterized by periods of exacerbation and remission. Summer is the most favorable season for its occurrence. The site of the predilection is the fingers, knuckles, elbows and ankles.

The mortality of Ritter's Disease was high before the advent of penicillin and chemotherapy. Some authors, and Ritter himself, placed it as high as 50 per cent. The use of sulfa, penicillin and blood plasma transfusions has greatly reduced the mortality. I have no figures for the exact percentage of recovery at the present time. Many recoveries may be cases of bullous impetigo and mild pemphigus that are reported as cases of Ritter's disease.

BIBLIOGRAPHY

1. von Rittersheim, G. R.: Die exfoliative Dermatitis jüngerer Säuglingen. *Centr.-ztg.f.Kinderh.*, ii:3-23, 1878.
2. Stellwagon, H. W.: *Essentials of Diseases of Skin*. Saunders, 1918. p. 213.
3. Hazen, H. H.: *Diseases of Skin*. Third edition. Mosby, 1927. p. 129.
4. Gandy, D. T.: Bullous impetigo of the new-born. *Arch. Pediat.*, lli:483-488 (July) 1935.
5. Stone, E. L.: *The Newborn Infant; A Manual of Obstetrical Pediatrics*. Second edition. Lea, 1938. p. 260.
6. Wideman, Arnold: Dermatitis exfoliativa neonatorum (Ritter's disease). *Am.J.Dis.Child.*, lxx:329-330 (November-December) 1945.
7. Tichenor, C. J.: Ritter's Disease. *Clin.Proc.Child.Hosp.*, ii:295-297, (November) 1946.
8. Kendall, N., and Aegerter, E. E.: Ritter's disease: review of literature with report of case. *J.Pediat.*, xv:733-739 (November) 1939.
9. Boisson, G.: Sur un cas de maladie de Ritter von Ritter-sheim consecutif a un pemphigus epidemique des nouveau-nés; en faveur de la pathogenie infectieuse et contagieuse de la dermatite exfoliative des nouveau-nés. *Nourrisson*, xxiii:28-29 (January) 1935.

PULSION DIVERTICULUM OF THE ESOPHAGUS*

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The first case of obstructed deglutition due to diverticulum of the esophagus was described by Ludlow in 1767.¹ Since that time, a great number of articles have been published describing this anatomic defect, which has been discussed by the various surgeons, anatomists, roentgenologists and clinicians. The greatest interest and final treatment has been in the realm of the surgeons.

Diverticula of the esophagus may occur at various levels. Two types are described, namely, the pulsion and traction type. The traction type², which is a true diverticulum, usually and most frequently occurs in the middle third. This type will not be discussed in this paper. The other, the pulsion type,^{2, 4, 6} is truly a herniation of the mucous membrane through the muscular wall at the pharyngo-esophageal junction and should be named a sacculation. This type may also occur in the lower esophagus just above the diaphragm.^{2, 3, 5}

Most authorities agree that the pulsion type of diverticulum originates from the posterior wall of the pharynx at the junction of the esophagus and pharynx, with a herniation of the mucosa through the lowermost fibers of the cricopharyngeal muscle, or at the junction of the inferior constrictor muscle of the pharynx and the cricopharyngeal muscle^{2, 6, 8} (Fig. 1).

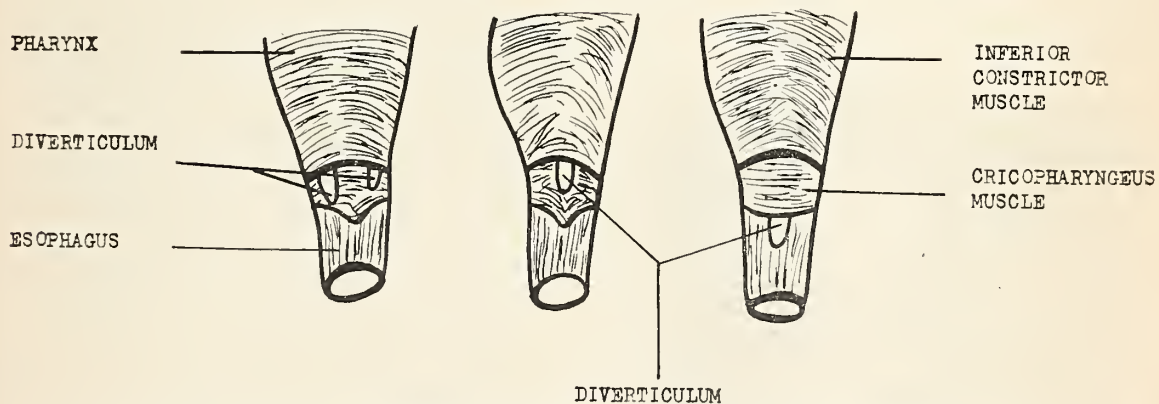


Fig. 1. Posterior View of Pharynx and Esophagus. The Four Sites of Origin of Pharyngo-Esophageal Diverticulum, As Described by Harrington, Lahey and Mais.

As to cause, there is considerable difference of opinion. Their fairly constant location suggests congenital origin, although they usually do not occur in more than one member of a family. Due

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†From the Department of Surgery, Veterans Administration Hospital, Des Moines, Iowa.

to its frequent location and its relationship to the cricopharyngeal muscle, some congenital malformation of the attachments of this muscle may be a causative factor. During early life the function of this muscle is not impaired, but with age the fibers may become inelastic, atrophy may occur, and a herniation may develop as a result of constant and increasing pressure of this congenitally weak area. The above theory is suggested by the average age of 57 years² of patients in a large series.

The muscular deficiency in this area, coupled with constant pressure during the act of deglutition on areas where blood vessels and nerves penetrate the wall, may be the factor responsible for herniation of the mucosa. Over a period of years this mechanism results in a true sacculation, producing progressive symptoms and signs later in life.

The average age of a series of 140 cases reported by Harrington² was 57 years. The youngest was 34 and the oldest 80. The condition occurs four times more frequently in the male.

The symptoms are progressive and vary according to location, size of sac, and size of opening. The symptoms may be present for 1 to 25 years; however, most cases seek medical attention during the first five years.

The earliest symptom is dysphagia, a sensation of obstruction in the neck, food seeming to stick in the throat. Later, food and mucus are regurgi-

tated. These symptoms do not occur until a definite sacculation is formed. Noisy deglutition and gurgling sounds in the throat occur. Pressure on the side of the neck will empty the sac. The sac may increase in size to extend down into the mediastinum and reach the arch of the aorta. It may attain such large size as to cause obstruction of the esophagus. As a result of difficulty

in getting food down the esophagus past the diverticulum, the loss of weight may be great. The sac may hold as much as 800 cc.

In cases of large sacs frequent regurgitation may occur, causing pulmonary complications such as bronchitis and bronchiectasis. Hoarseness may occur and is due to pressure or inflammatory reaction on the recurrent laryngeal nerve.

After the sac is definitely formed, the diagnosis can usually be made on the basis of symptoms alone. However, these findings should be confirmed by roentgenographic examinations. In the early cases, when the symptoms are vague, a clinical diagnosis may not be established until after esophagoscopy and x-ray examinations.

Report of Case

A white male, 49 years old, was admitted to the surgical service Aug. 12, 1946, with a history of having been perfectly well up to one and a half years prior to admission. At this time he noticed that he had to clear his throat frequently. This became progressively worse, and a few months later he had a choking sensation whenever he ate coarse foods. Since then, he had had difficulty in swallowing and had been regurgitating undigested food. At the present time he was able to drink liquids only with difficulty and, if he partook of a heavy meal, he would vomit a large amount of undigested food. He lost some weight. He stated that he had a sense of fullness on the left side of his neck following each meal, and that, by compressing the left lateral aspect of his neck, he could bring food up into his pharynx

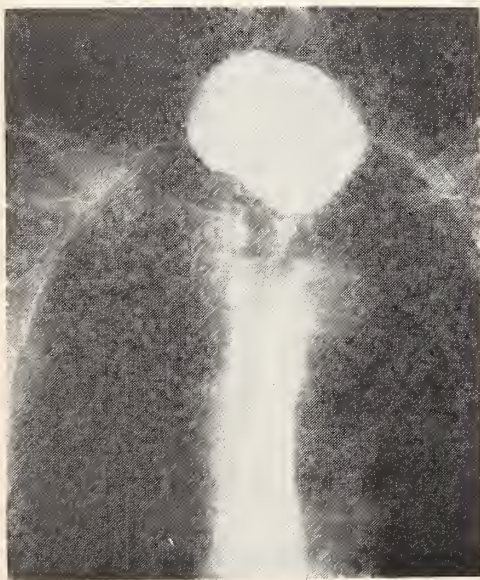


Fig. 2. Anterior View. Large sac filled with Barium, Extending Downward to the Manubrium.

and vomit. In this way, the fullness and pressure sensation was relieved.

The physical examination was essentially negative except that the patient was tall and thin. The esophagoscopy revealed a slitlike opening on the posterior wall at the esophagopharyngeal junction. The opening measured about 6 mm. No ulceration or tumor could be seen in the sac, which was thin-walled.

The x-rays (Figs. 2, 3) revealed a large diver-



Fig. 3. Lateral View. Sac Extending Behind the Manubrium.

ticulum measuring 6 by 7 cm. in diameter when completely filled with barium. The sac lay anteriorly and to the left, extending downward to below the manubrium.

On Oct. 3, 1946, under cervical block and local novocaine anesthesia, a one stage diverticulectomy was performed through a left vertical neck incision. A large, thin-walled sac was found on the left side, coming from the posterior wall at the junction of the inferior constrictor and cricopharyngeal muscle.

Postoperative Treatment: The patient was given nourishment for 10 days through a Levine tube. The wound healed after evacuation of a small hematoma. After removal of the Levine tube, the patient was placed on a liquid diet for 10 days, followed by a soft one. He received penicillin, 30,000 units every three hours, for seven days. The patient had no difficulty in swallowing and gained weight on his diet. About four weeks following discharge, he was readmitted with a local abscess at the lower end of the wound. This closed up rapidly after evacuation. The patient was feeling better and showed a continu-

ous gain in weight. A recheck x-ray of the esophagus revealed a fleck (Fig. 4, 5) at the point where the neck of the sac was ligated and inverted.

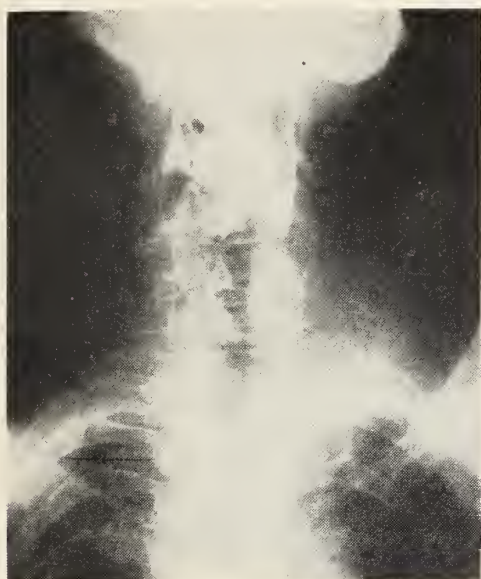


Fig. 4. Anterior View, Postoperative. No Evidence of Diverticulum.

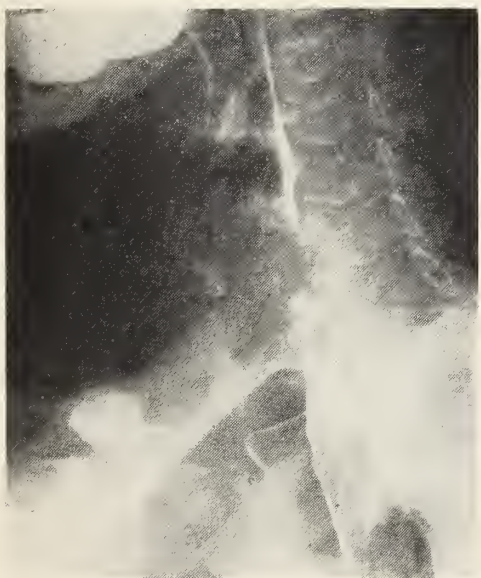


Fig. 5. Lateral View, Postoperative, Reveals a Small Barium Fleck on the Posterior Wall of the Esophagus at Site Where Neck of Diverticulum was Sutured.

Discussion of Treatment

The surgical treatment of this condition was started in 1877, at which time a diverticulotomy was performed. It wasn't until 1884 that a diverticulectomy was accomplished. The first successful operation was by von Bergmann in 1892.

These operations were associated with a high mortality, chiefly because of mediastinitis, pneumonia and pulmonary abscess. These complications led to a two stage operation, which Goldman introduced in 1909.¹

There is still some difference of opinion as to the procedure of choice, i.e. the one or two stage operation. Lahey,⁴ in 1940, reported a series of 118 cases in which the two stage procedure was used. One patient died, and 3 had recurrences that required reoperation. Shallow,¹⁰ in 1936, reported a series of 79 cases in which there were 2 operative deaths and 2 recurrences. Seventy-six of these patients underwent the one stage operation, and the remaining 3 the two stage.

Harrington² in his series of 140 cases reported in 1945 employed the one stage operative procedure in 115 of the cases, and the two stage in 25. In the series of 115 cases, there were no operative deaths. A temporary pharyngeal fistula developed in 5 cases. In 2 cases the diverticulum recurred. In the series of 25 cases, there was one operative death, and that was in case of well advanced Parkinson's disease. A temporary fistula developed in 6 cases. There were 3 recurrences.

The period of hospitalization in this series should also be considered. In the two stage procedure the average convalescence was over five weeks, whereas in the one stage the period of hospital stay was three weeks.

Complete removal of the sac, including the neck, is paramount and accepted as the ideal and effective surgical procedure. The technical difference between the single and multiple stage methods is that the amputation of the sac is accomplished in the two stage procedure during the second stage. The principle involved is to prevent mediastinitis from occurring by mobilization of the sac and by packing off the fascial planes of the neck to the mediastinum; and, during the ensuing interim, granulations are formed to seal these planes off, permitting amputation of the sac without fear of infection occurring in the mediastinum.

However, in these days of improved technics, and with the use of specific chemicals and antibiotics, the risk of mediastinitis and pneumonia is greatly lessened, and the operative risk, according to many recent series, is less than that of the two stage procedure.

It is advisable to check the vocal cords both preoperatively and postoperatively.

Some authorities pass a stomach tube prior to surgery and feed the patient in that manner postoperatively. Others pass a thread for a guide

for future passage of tube if a fistula should develop.

Many methods have been devised to aid in the localization of the sac during surgery, such as passage of the esophagoscope into the diverticulum; others have used a dilute solution of methylene blue, which the patient drinks several days prior to surgery so that the solution will stain and outline the sac.

In regard to the anesthetic agent to be used, one finds a difference of opinion in the use of anesthesia—inhalation, local or cervical block. A regional or cervical block is ideal in many respects, since the patient's reflexes remain active so that an accumulation of secretions can be swallowed, or coughed up and aspirated. Frequently, the sac may contain secretions or fluid, which is forced into the pharynx at the time of manipulation and dissection of the sac. The act of swallowing is often helpful in identifying small diverticula as air is forced into the sac.

The method of approach is dependent upon the side the diverticulum is located, which can be demonstrated by physical findings, x-rays or esophagoscopy. In the series reported by Harrington 116 occurred in the left cervical region, and 24 were present on the right side.

Operative Technic of One Stage Procedure

In the operation, the skin incision is carried down through the superficial fascia and platysma muscle from the level of the hyoid bone to 2 cm. above the clavicle along the anterior border of the sternocleidomastoid muscle. Injury to the external jugular vein is avoided. The sternocleidomastoid muscle is retracted laterally. The omohyoid and sternohyoid are identified and retracted medially.

The carotid sheath is then exposed and displaced laterally. The thyroid gland is retracted medially; this reveals the pretracheal fascia that envelops the trachea and esophagus. The fascia is incised about the level of the cricoid cartilage, at which point the neck of the sac is usually found. The fascial covering of the sac is dissected loose, and the diverticulum freed from the surrounding structures. The inferior portion of the sac is released and elevated into the wound, and careful dissection around the neck of the sac carried out. The neck of the diverticulum is freed from any muscular attachment, and the neck of the sac is transfixed. The diverticulum is excised. The neck of the sac is then inverted into the pharynx, and the defect in the muscular wall is closed with interrupted catgut sutures.

A soft rubber drain is placed in the wound, but not near the pharyngeal wall. The wound is then closed in layers with interrupted sutures.

Summary

The treatment of pulsion diverticulum of the pharyngo-esophageal junction is surgical. The defect occurs as a sacculation of mucosa at the junction of the inferior constrictor and the crico-pharyngeal muscle, or through the latter muscle, either on the left or right posterior wall or in the midline posteriorly.

A complete removal of the sac at the neck is essential to recovery and in the reduction of frequency of recurrences.

The procedure of choice is still debatable, but the tendency is toward the one stage diverticulectomy rather than the two stage.

The complications are temporary pharyngeal fistula, wound infection, mediastinitis, pneumonia, stricture formation, and injury to the recurrent laryngeal nerve.

BIBLIOGRAPHY

1. Goldmann, E. E.: Die zweideutige operation von pulsionsdivertikeln der speiseröhre; nebst bemerkungen über den desothagusmund. *Beitr.z.klin.Chir.*, lxi:741-749, 1908-1909.
2. Harrington, S. W.: Pulsion diverticulum of hypopharynx at pharyngo-esophageal junction; surgical treatment in 140 cases. *Surgery*, xviii:66-81 (July) 1945.
3. Holinger, P.: Esophageal diverticula. *S.Clin.North America*, xx:185-194 (February) 1940.
4. Lahey, F. H.: Esophageal diverticula. *Arch.Surg.*, xli:1118-1140 (November) 1940.
5. Lahey, F. H.: Surgery of the esophagus. *Proc.Interstate Postgraduate Med. Assembly of North America*, 1946, p. 3-8.
6. Lahey, F. H.: Esophageal diverticula. *S.Clin.North America*, xxi:631-639 (June) 1941.
7. Ludlow, A.: Obstructed deglutition, from a preternatural dilatation of, and bag formed in, the pharynx. *Med.Obs.Soc.Phys. Lond.*, iii:85-101, 1762-1767.
8. Maes, U., and McPetridge, E. M.: General consideration of pharyngo-esophageal diverticula. *Internat.S.Digest*, xv:67-84 (February) 1933.
9. Rokitsansky, C.: Divertikel am pharynx. *Med.Jahrb.d.k.k.österr.Staates*, xxx:222-225, 1840.
10. Shallow, T. A.: Combined one stage closed method for treatment of pharyngeal diverticula. *Surg.,Gynec.&Obst.*, lxii:624-633 (March) 1936.
11. von Bergmann, E.: Ueber den Oesophagusdivertikel und seine behandlung. *Arch.f.klin.Chir.*, xliii:1-30, 1892.

ACCESSORY SCROTUM, POSTERIORLY LOCATED

Review of the Literature, and Report of a Case

W. W. Daut, M.D., Muscatine, and
R. V. Daut, M.D., Davenport

Scrotal abnormalities are encountered with some frequency, but in general the abnormalities are the result of the associated malformation or maldevelopment of other parts of the genito-urinary system. Lowsley and Kirwin¹ have perhaps the most concise description of the normal embryologic development of scrotum. They state in essence that when the embryo is 21 mm. in length, the labioscrotal swellings are noted at the base of the phallus. During the 38 to 45 mm. stage the phallus elongates, and the fusion of the margins of the urethral folds in midline removes the primitive urogenital opening farther and farther

anterior to the anus. During the elongation of the phallus, the labioscrotal swellings gradually migrate downward, forming the scrotal swellings. The scrotal raphe is formed by fusion of the tissues of the labioscrotal swellings within the septum that were originally formed by the union of the urethral (or inner genital) folds. As the scrotum develops, its mesenchyme differentiates into layers similar to those composing the abdominal wall. The two vaginal sacs are formed separately by the protrusion of the vaginal processes of the peritoneum into the scrotum.

As Cabot² points out, the half of the scrotum corresponding to an undescended testicle is frequently rudimentary. In pseudohermaphroditism the scrotum is cleft, the halves resembling labia majora. They may contain testicular tissue on each side. A partial, laterally cleft scrotum may accompany such maldevelopments as severe hypospadias, ectopia vesicae, etc. As Keyes³ states, the scrotum actually develops independently of the testicles. The two sacs and septum develop in an unpaired scrotal area and are completed with descent of the testicles, according to the studies of Keibel and Mall quoted by Hinman. The scrotum is not formed by fusion of previously present scrotal tubercles. Since this is the case, split scrotum and lateral duplication of the scrotum are associated with a urethral defect in most cases.

As has been mentioned, a lateral duplication of the scrotum, or split scrotum, occurs with some frequency. Francis⁴ reports a case of prepenial scrotum (marsupial type) with complete absence of the urinary system. Annan,⁵ in 1839, reported the first case of fused unilateral testicle in which there was no raphe or septum present in the scrotum.

An exhaustive search of the literature was unsuccessful in securing any reference to a case similar to that which we are to present, that of an accessory scrotum located posterior to the normally developed scrotum and anterior to the anus. Gould and Pyle⁶ in their interesting volume on anomalies and curiosities of medicine do not include any case remotely similar. Broman, Collier, Turner, and Guisy,⁷⁻¹⁰ in their articles on genital and scrotal abnormalities, all fail to describe this abnormality.

A white male child delivered by one of us (W.W.D.) at term, July 18, 1948, was noted to have an anomaly in the area between the scrotum and anus. A glandular hypospadias was also discovered at this time. The infant was found to

be physically perfect in every other respect on detailed examination. Both testicles had descended into the normal anterior scrotum.

The abnormality consisted of a lobulated semi-pedunculate outpouching of skin, approximately 1 by 2 by 7 cm. in dimension. The exterior surface showed marked serrations. Upon stimulating the cremasteric reflex of the normal (anterior) scrotum, the abnormal posterior appendage also became tense, with increase in the serrations.

When the child was 2½ months of age, one of us (R.V.D.) performed an accessory scrotumectomy under general anesthesia on Oct. 4, 1948. The abnormally placed scrotum was first divided in a sagittal plane to determine with certainty the absence of structures like the urethra, etc. About 3 cm. from the dependent portion of the accessory scrotum, a structure appearing to be formed of muscle was dissected free. An elliptic incision was then made at the base of the entire accessory structure, and the whole posterior scrotum removed. Closure was accomplished by three shallow mattress sutures. The child's post-operative course was entirely satisfactory.

The pathologist's report read: "Sections from the specimen submitted show skin, subcutaneous and adipose tissue, the latter divided into lobules by connective tissue trabeculae. There are numerous striated and nonstriated muscle bundle fibers extending in all planes, with a thin intercolumnar fascia similar to the cremasteric muscle fascia, also elastic connective tissue intermingled with smooth muscle fibers, suggestive of dartos. The histologic picture and architecture is that of the scrotum."

Summary: An unusual case, without evident counterpart in medical literature, is presented: that of a posteriorly located accessory scrotum, treated by excision of the structure.

BIBLIOGRAPHY

1. Lowsley, O. S., and Kirwin, T. J.: *Clinical Urology*. Second Edition. Williams & Wilkins, 1944. Vol. I, p. 360.
2. Cabot, Hugh: Editor, *Modern Urology in Original Contributions by American Authors*. Lea, 1936. Vol. I, p. 435.
3. Keyes, E. L.: *Urology*. Appleton, 1923. p. 513.
4. Francis, C. C.: Case of prepenial scrotum (marsupial type of genitalia), associated with absence of urinary system. *Anat. Rec.*, lxxvi:303-308 (March 25) 1940.
5. Annan, S.: Malformations of genital organs. *Am.J.Med. Sc.*, xxiv:321-324, 1839.
6. Gould, G. M., and Pyle, W. L.: *Anomalies and Curiosities of Medicine*. Saunders, 1897.
7. Broman, Ivar: Normale und Abnormal Entwicklung des Menschen. Bergmann, 1911.
8. Collier, J.: Malformation of the external genitals in the male. *Brit.M.J.*, i:409, 1889.
9. Turner, W.: On some malformations of the organs of generation. *Edinburg M.J.*, x:575-687, 1864-1865.
10. Guisy, B.: Etude sur les difformités congenitales et les affections des organes génito-urinaires des deux sexes chez l'homme comme cause des troubles des facultés intellectuelles ou des la folie cite sympathetique. *Progrès Méd.*, 3 S. iii:371-373, 1896.

SPECIAL ARTICLE

THE VETERANS ADMINISTRATION
PROBLEM; A SURVEY OF 200
CONSECUTIVE CASES*Tom Bentley Throckmorton, M.D.,
Des Moines

The pension system for wounded or disabled soldiers is almost as old as our country. It followed in the wake of the Revolutionary War. Since that memorial epoch in the life of our nation, the United States has fought six major wars; the War of 1812, the Mexican War, the Civil War, the Spanish-American War, World War I and World War II. All of these helped to fasten the pension system more securely on the government, and it has become one of its established policies.

My first knowledge of pensions for old soldiers came when I was a lad. Both of my grandfathers fought in the Civil War. Both belonged to Company E, 34th Iowa Infantry. Both were discharged for disability. Only one of them eventually received a pension. During the summer of 1894, when I was 9 years old, I stayed at the home of one of my grandparents. Among the several chores assigned me was going to the post office for the mail. However, at the first of each month, I was relieved of the duty of mail-carrier. Wondering the reason for the change, I made query, only to be informed that grandfather's pension was expected, and no chance was to be taken on its safe delivery.

I remember the awe that came over me when I beheld the brown envelope with its government printing and the precious check for \$8.00. In that day a pension of \$8.00 was considered quite good. Of course, today, the riot squad would be called out to restore the peace in the home of any veteran who only received an \$8.00 allowance. But in that day men worked ten hours for a wage of \$1.00, and they worked six days a week. In fact, I knew some workers who fed, clothed and sheltered themselves on the magnificent wage of 50 cents a day, or \$3.00 a week. But the reason for their ability to do so is quite obvious. One could purchase three pounds of butter for 25 cents; corn sold for 8 $\frac{1}{3}$ cents a bushel; hay for \$3.00 or less a ton; one could buy a good pot roast—enough to serve a family of nine for three meals—for 45 cents, and the butcher would throw in all the liver you wanted for

your cat or dog. It was the purchasing power of the dollar that made possible the low wages of that day. So, after all, a pension of \$8.00 was to be respected.

But my academic course concerning pensions came a few years later. My father served for years as secretary of the Lucas County pension board. Since I was rather adept in the use of the typewriter, my father made me the magnanimous offer of 25 cents for typing the reports that were sent to the Bureau of Pensions at Washington, D. C. The board met monthly. Now, in that day no boy—at least in our family—received any spending money or allowance. So I gladly accepted the offer, for that 25 cents afforded all the income I had.

In typing the pension reports I received my first-hand knowledge of medical nomenclature. Perhaps my father may have had a definite, but hidden, motive in mind when he made me his sub-secretary, for, in retrospect, I can see many things he did in his desire to attract me to the field of medicine. Of course, the old soldiers complained then of their various ailments just as veterans do today. Many a time I typed as a complaint—chronic diarrhea, piles, rupture, weak back, pain in the legs, rheumatism, etc. I recall one old chap who insisted on having his pension raised because his eyes watered in the wind, and another who demanded assistance because his piles came down and “bled like a stuck hog.” All in all, I got quite an insight into the workings of the rather crude pension system of half a century ago, but it evidently laid the foundation for my work as one of the present day examiners in the field of neuropsychiatry.

Almost 25 years elapsed between the beginning of World War I and World War II. When the Pearl Harbor debacle on December 7, 1941, put the United States into war, it was the general belief that the many errors that were made in recruiting an army in 1917 and 1918 would not be repeated. Hence, when the selectee of 1942 was called before a battery of medical examiners, he was supposed to “get the works,” by which all his physical and mental shortcomings would be laid bare. No man with an artificial limb had a chance of getting in the armed forces *this time*, for the selectees were divested of all clothing. Since more mistakes in medicine are made through lack of observation than through ignorance, the examiners were given the golden opportunity of scrutinizing each candidate from the crown of his head to the soles of his feet. Also, he had at his disposal a questionnaire, which dealt with many things that had to do with the man's past

*Read before the Des Moines Medical Library Club, Oct. 13, 1948.

medical history, and which each selectee was supposed to fill out previous to his physical examination. Of course, if the selectee had any defects, their presence was underscored on the paper, figuratively speaking—provided the man did not want to be taken into the armed forces. On the other hand, some defects, known to him, were minimized or entirely omitted providing he wanted to be accepted. It is perfectly obvious that a physical defect is more readily discernable than a mental one. Hence, the great burden of determining the fitness of a selectee for active service was placed squarely on the neuropsychiatric department. By making proper examination, any physician, who is not blind, can readily determine the presence of a perforated ear drum, an artificial eye, a cleft palate, or flat feet, but not physician can made the diagnosis of epilepsy, psychopathic personality, migraine, or nervous or mental instability merely by looking at the person. It is true that he may notice something in the man's make-up that suggests he is not 100 per cent perfect, but he is not able, by observation alone, to determine whether there is sufficient evidence to defer or reject the individual. What the examiner needs is time to study the individual and an accurate history of his past life.

Furthermore, no physician possesses the diagnostic acumen that will tell him in advance just how an individual is going to react in the face of sudden or unexpected adversity, danger or tragedy. General Sherman's remark, "War is hell," is all too true, and the most astute and erudite physician cannot foresee what may happen to a supposedly normal and well balanced individual in civil life when he is brought face to face with the terrors of hell. The records of World War II are full of instances in which the inductee showed his utter unfitness for service after a few days to several weeks or months following his induction into the armed forces. Such happenings are not necessarily the blame of the medical examiner. The physically unfit were at once disqualified, as their defects were quite obvious; whereas the candidate for a psychoneurosis, anxiety state, migraine, headache, epilepsy, nervousness, various forms of insanity—such as dementia praecox, manic-depressive insanity, psychasthenia, and other lesser types of mental disorders—presented an entirely different problem, and one that was hard to solve in many instances, first, because of the shortness of time that was allotted the neuropsychiatrist in estimating the stability of the nervous mechanism and, second, because of a lack of any known method by which one may determine how an individual will react to the environment of war. I am confident that, had

the selectees been placed on a period of probation—say six months—before they were inducted into the armed forces, there would have been weeded out during that period many individuals who soon gave evidence of their unfitness to serve, and who would have no claim today on the government for something that was actually present or in the offing at the time they were inducted into service.

I am not unmindful of the role that these various nervous and mental disorders play in civilian life. Every physician is cognizant of their prevalence, and it is only reasonable to assume that, war or no war, many of these same individuals who broke down in field and camp would have broken down in time under the stress and strain of civil life. In fact, in many instances, the inductee went all to pieces while serving in some capacity in the United States where he was in no more danger than the civilian population. Evidently, it was his inability to adjust himself to the routine and regimentation of a new environment, together with the possibility of going overseas with its attendant danger, that brought out the inherent weakness in his nervous mechanism.

Early in 1947, I was asked by the Iowa Medical Service to serve as an examiner in the department of neuropsychiatry. At first, I was inclined to turn thumbs down on the proposition. However, when I realized the shortage of capable men in this specialty of medicine, I decided it was my duty to help eradicate this particular bottle-neck, which was obstructing the flood of requests for examination; hence, I began to take on the veterans as consistently as I could with my regular practice. As I grew in knowledge and experience, I began to wonder what all my efforts would accomplish, and what would be the summation of my work. To find the answer, I fingered through the records of the first 200 examinations I made, and it is of these findings I now make mention.

Beginning in February, 1947, and ending Dec. 31, 1947, I examined 129 applicants. From January, 1948, to June, I examined 71. I could have examined many more had I but had the time. Practically all of these examinations required from one and a half to two hours or more in time. I felt the individual was entitled to the same consideration as though he were a private patient. That my work must have been acceptable is evidenced by the fact that more information was requested in only 6 cases. When I catalogued the various diagnoses *that the government had made* in this series of 200 cases, I found they separated themselves into 25 different groups, given as follows:

Anxiety neurosis	51
Psychoneurosis	42
Organic nerve disease	
Central nervous system and	
Peripheral nervous system.....	27
Psychiatric examination—no diagnosis	13
Dementia praecox	10
Nervousness	9
Migraine	7
Neurologic examination	6
Shrapnel wounds	5
Neurasthenia	5
Epilepsy	4
Depressive psychosis	3
Encephalopathy	3
Manic-depressive insanity	2
Psychosis—undetermined	2
Neurocirculatory asthenia	2
Amputation	1
Hypochondriac	1
Malaria	1
Recurrent injury to eighth nerve.....	1
Obsessive-compulsive state	1
Bursitis	1
Anginal syndrome	1
Psychopathic personality	1
Conversion reaction	1

I was not surprised when I found that the psychoneuroses, including the anxiety state, constituted almost one-half of the total number. This finding clearly demonstrates our inability as medical men to determine the degree of stability of the human nervous machine when put to the stress and strain of war. Of the 51 cases classed as anxiety neurosis, 37 had been overseas, and 14 had never been out of the United States. Of the overseas group only 13 developed the anxiety state secondary to combat duty, whereas the remaining 38 of the anxiety group had nothing to do with combat duty. Twenty-four developed their anxiety neurosis after their return to the states, and 14 developed it while they were stationed in the states. Forty-nine of the 51 were receiving disability benefits ranging from \$13.80 to \$96.60 a month and, in some instances, other emoluments as well. In two cases no rating was obtained. At the time of examination 36 were gainfully occupied. Fifteen, figuratively speaking, were resting on their laurels. The following case illustrates quite well just how the anxiety state can develop.

Case 198—"Anxiety Neurosis": Male, age 30, student at Iowa State College at Ames, married, complained of being shaky and trembly, inability to concentrate under pressure, or to sleep or relax, right-sided headache, loss of weight and fatigability. These complaints were said to have become evident when he was stationed at Camp Perry, Va., in 1944-1945.

Born and reared in New York state, he was gradu-

ated from high school at 17 years of age, after which he attended a trade school in Connecticut for 18 months, where he received training as an electrical worker. For the next four or five years, he worked for an electrical firm in Stamford, Conn.

He was inducted into the Navy in New York City, July 22, 1943. Following his basic training at a naval training center, where he was stationed for three months, he was sent to Iowa State College at Ames for training in the electrical department. After his graduation in electrical engineering in February, 1944, he was retained as an instructor in the college until the following November, when he was returned to Camp Perry to take advanced work in his specialty.

Here he found the pace too swift, and he broke down in February, 1945. He had been home on a short furlough to see his sick child, and to comfort his wife who was distraught over the child's illness. He parted with his family with much mental perturbation. As he journeyed back to camp, he pondered over the past, present and future. By the time he reached Richmond, he was in an unhappy and unsettled frame of mind, being worried about his domestic situation, and much concerned about his future prospects at the camp. Especially was he concerned about the none too bright outlook on his future, and he was markedly conscious of the irritation that the strictness of camp discipline produced. It was while waiting for a bus to take him from the city to the camp that he collapsed mentally. He became shaky, weak, sweaty and trembly, and appealed for help to a shore-patrol man who happened by. He was taken to the hospital at Camp Perry, where he was a patient for six weeks. He was then sent back to duty but in two weeks again broke down. He remained in the hospital until June 2, 1945, when he was discharged from the service because of "psychoneurosis—anxiety state."

He returned home and, in two or three weeks time, took up his former work with his old company. A year later he quit his job and returned to Ames to continue his education under the G.I. bill. He receives \$125 a month allowance from the government besides his tuition and books. He is apparently happy and contented in his work.

Concerning the right-sided headache, of which there is no service record, the following history is significant. He became subject to headache when he was in grade school. He continued to have headache, or one-sided headache, at intervals, sometimes going three or four months between attacks. Usually the attacks were right-sided, the eye was painful, photophobia was present, and there was tenderness and soreness in his neck. Sometimes the pain would awaken him during the night, and he would frequently awaken in the morning with a sick-headache. While in service he was treated for these attacks, it being thought that sinus trouble, eye strain and nerves were the causal factors. It is of interest to note that his mother had long been a sufferer

from sick-headache. His headache, in my opinion, is not service connected.

This case illustrates how worry and anxiety can completely upset a supposedly normal individual and make him a governmental liability. Whether or not the medical examiner who passed him for service was cognizant of the migraine factor, I have no knowledge. Whether or not the man concealed his affliction, as I know some did, I do not know. True migraine was a cause for rejection. Had this condition been discovered, as proper questioning would probably have brought out, this man would have been disqualified, and the taxpayers saved much money in training and educating a man who proved of no practical value to the government.

The psychoneuroses, exclusive of the anxiety state, form the next largest group. Of the 42 cases so classed, 21 had seen service overseas and 21 had never left the states. Of the overseas group, only 7 developed psychoneuroses secondary to combat duty, while the other 35 had nothing to do directly with combat duty. Fourteen developed their neuroses after their return to the states, and 21 developed it while stationed in the states. Thirty-seven of the 42 were receiving disability benefits ranging from \$13.80 to \$82.80 a month, and, in some cases, governmental aid was supplementing the pension. At the time of examination 39 were gainfully employed or occupied. Only 3 were not at work. The following case illustrates how an unstable person may go to pieces, even when not subjected to dangerous or hazardous duties.

Case 127—"Psychoneurosis, Mixed Type": Male, age 33, salesman, complained of feeling tired, weak and jumpy inside. These conditions were said to become worse if he were under tension or pressure. He had experienced a similar condition, due to overwork, in 1938. A native of Iowa, at 17 years of age he was graduated from one of the Des Moines high schools. Following graduation, he became a commercial artist, working in Des Moines, Seattle and Chicago. Six years of this type of work wore him out, and he had a "nervous breakdown," from which he states he had never fully recovered.

When war was declared, he returned to Des Moines and worked at the Ordnance Plant for two years. He was inducted into service in March, 1944, and assigned to the Navy. He admits that he did not mention his previous breakdown at the time of his induction, because he wanted to get into the Navy. He received his basic training at Farragut, Idaho. Following his antitetanic serum injection, he became quite ill. This reaction was followed by "nervousness and a jumpy sensation." After 13 weeks of training he was ordered to prepare himself for transfer. This made him nervous, and he reported to the sick bay, where he was given a sedative. Under sealed orders, he was transferred to Portland, Ore., and from there to San Pedro, Cal.

He was obliged to make the trip in a converted stock car, where, under such circumstances, he got no sleep and not much food. When he arrived at his destination, after 36 hours of travel, he was, to use his expression, "a complete wreck." He was hospitalized immediately and sent to the Long Beach Naval Hospital, where he remained until he was discharged Sept. 3, 1944, having served only six months.

Following his discharge, he returned home and, after a rest of six weeks, again took up his old job at the Ordnance Plant. He continued to work until the plant closed down. Having no desire to get back into the field of commercial art, he became a salesman. He is quite contented and happy in his work. He draws \$13.80 disability benefits per month.

This case illustrates how an individual with an unstable nervous mechanism, even though not exposed to the dangers of war, broke down completely under its regimentation. Being of an artistic temperament and highly sensitive, the stage was all set for the main act when he gave evidence of his inability to integrate himself in training camp and in his defense reaction to the treatment accorded him when he was shipped in a stock car instead of a Pullman. The latter was the "straw that broke the camel's back." Without knowledge of his former breakdown, no examiner could foretell that this man was a candidate for psychoneurosis, or some other form of mental disorder.

Case No. 171—"Psychoneurosis, Mixed Type": The man, age 31, carpenter, had stated he had no complaints and never did have any except numbness of his feet. He went into service April 6, 1942, and, by the following July, he was in Greenland. It was there that trouble with his feet began. Many times on awakening he would find that his feet were numb. Walking, rubbing or bathing his feet would readily clear up the "pins and needles" sensation. This troublesome discomfort continued to bother him until he returned to the states. While he was home on a furlough, his feet never bothered him.

He was ordered to report to Camp Ellis. Soon after, his feet began to bother him, and he reported to the sick bay. He was sent before a board, which thought him psychoneurotic, because he was always complaining about his feet being numb and yet, on examination, the peripheral nerves and vascular systems of the lower extremities were found to be normal. He was discharged as "psychoneurotic" Oct. 6, 1943. Since that time, he has had no trouble with his feet, and he has been regularly employed at good wages. He draws \$13.80 a month for disability.

The proper diagnosis in this case, in my opinion, could have been readily made if only the examiners had taken time to think logically. The old maxim "A penny held close to the eye obstructs the dollar beyond" certainly holds true in this instance. Because no objective evidence of nerve or blood vessel disease was found, the examiners concluded that the complaint existed only in the man's mind, and they listed him as a psychoneurotic. The simple truth of

the matter is this. The man is 78 inches tall, or 6 feet 6 inches. He grew so rapidly during adolescence that his parents had a bed made for him 88 inches in length. Since the army cot is only 64 inches in length, 14 inches of this man's anatomy had to hang somewhere in space. It is evident that his head and upper chest with its appendages could not do this; hence, it was his lower extremities that had to take to the air. Pressure on nerve trunks or interference with circulation are the most frequent causes of transient paresthesia. This evidently happened when the man's legs hung over the foot of the cot. This case illustrates that the physician needs some of the instinct of the detective, as well as medical knowledge, in order to arrive at a proper diagnosis.

The next group of cases, which represent about one-eighth of the total number, is made up of individuals who received injuries to their brain or peripheral nerves. There were 27 cases, given as follows:

Head injury	8
Peroneal nerve	3
Ulnar nerve	2
Sciatic nerve	2
Optic nerve	1
Facial nerve	1
Ruptured intervertebral disk	1
Brachial plexus	1
Median nerve	1
Radial nerve	1
Musculocutaneous nerve	1
Intercostal nerve	1
External popliteal nerve	1
Anterior tibial nerve	1
Posterior tibial nerve	1
External cutaneous nerve	1

The injuries in 23 cases were the result of trauma, i. e. gunshot, shrapnel, grenade or concussion. The other 4 cases consisted of optic nerve atrophy, Bell's palsy, ruptured intervertebral disk, and paralysis of the anterior tibial nerve due to cellulitis of the leg. One case had sustained a depressed fracture of the skull in 1938, from which he had made a good recovery. He was drafted in 1943 but discharged 9 months later because of asthma. He put in a claim for aggravation of symptoms due to his old head injury. I found no basis for his claim on examination. Of the remaining 26 cases, the status is as follows. Nineteen were overseas, 7 were never out of the states. Sixteen saw combat duty, and 10 did not. Twenty-three are drawing disability benefits ranging from \$13.80 to \$138 a month. Twenty-two are gainfully employed. The other 4 are in college or not working.

Case No. 106: The extreme to which an individual may go in order to receive disability benefits is illustrated by this case. The man, a rubber worker,

age 35, was referred for examination because of weakness of his right upper extremity, associated with hyperesthesia in the distribution of the cutaneous branch of the musculocutaneous nerve. He claimed his injury was caused when a jeep backed on him early in the spring of 1943. He made no report of the accident but continued at his work. Some months later an x-ray of his chest was taken with negative findings. He was transferred in January, 1944, to a camp in Georgia, where he continued to do mechanical maintenance work. Here he claimed that his legs bothered him, his right shoulder pained him, and it was difficult for him to raise his arm, which was numb. At no time was he hospitalized. He was discharged from service in November, 1944, about 18 months after the alleged accident.

He returned home and in two weeks went to work in a garage, where he has since been employed for over two years at a wage of \$200 a month. He draws from the government \$41.40 disability benefits.

On examination I found nothing wrong with the man. While he disdained to raise his right arm, it was evident that he could do so if he wished. The shoulder girdle and arm muscles were well developed. When the right arm was placed horizontally, its position was readily maintained. This act would be impossible if motor weakness was present. There was no change in the cutaneous sensation of the upper extremity. The hands were equally calloused and the grip equally strong. It is my opinion, whatever minor injury the man originally sustained, it had long since ceased to exist, and that his alleged inability to use his arm came from his own willful volition not to do so. In my judgment, he is a malingerer, pure and simple.

The next group of cases, which represent about one-sixteenth of the total number, was referred for psychiatric examination. In none of the 13 cases did I find any clearcut mental phenomenon. The diagnoses found on their authorization papers are as follows:

- Back and neck injury.
- Acne vulgaris.
- Nervous disorder.
- Back injury, kidney trouble, nervousness, arthritis.
- Pension purposes.
- Back trouble.
- Somatization reaction.
- Fracture right humerus, amputation of right thumb.
- Abdominal nervous condition.
- Deformity of iris, injury of ear.
- Fusion of third and fourth cervical vertebrae.
- Scars left forearm; appendectomy scar.
- For insurance purposes—World War I.

Of this number 10 had been overseas, while 3 had never left the states. Of the overseas number 5 had been in combat and 8 had not. Disability benefits ranging from \$13.80 to \$115 a month were allowed 6 of this group, while 7 re-

ceived no benefits or were applying for them. Seven were employed: 3 were in college under the G.I. Bill of Rights; 2 were unemployed; and one would not work for fear his pension of \$115 would be reduced.

Case No. 133: This case is of interest in that it brings out the incorrectness of a diagnosis that could have been properly made by obtaining a history of the individual's life. A man, age 40, farmer, was referred for psychiatric examination because of "back trouble." This condition was said to have occurred in the spring of 1945, about one year after his discharge from the Army.

He was inducted into the armed forces in March, 1944, and sent to Maryland for his basic training. Some six or eight weeks after his induction, he suddenly passed out one day on the drill field. He was hospitalized, with the tentative diagnosis of "light stroke." He ventured the information that he had had no warning prior to his loss of consciousness. Two spinal punctures were done before he was dismissed in June, after serving three months. It was not until the spring of 1945 that his back began to bother him. He gave no history of injury and was treated for lumbago. While in the Veteran's Hospital for treatment of dermatitis of his hand, he complained of his back and put in a claim for disability benefits.

Being interested in the "light stroke" story, I began to question the man concerning his early life. I was not surprised when he told me the following tale. When he was 13 years of age, he sustained his first black-out while hunting. Some weeks later, he had a similar attack one evening when he was feeding the stock. From that time, he continued to have spells at varying intervals. Sometimes he experienced a warning that would enable him to lie down. Sometimes the attacks were transient and sometimes severe. When he was 28 years of age, he had an attack while riding in a truck. He fell from the vehicle and sustained a cut above his eye. The last major attack that he recalls occurred about a year before he went into the army. At that time, he was helping to carry logs when he suddenly fell backwards. He was unconscious for about 30 minutes. The back of his head was quite sore from the fall. Since that time, he has continued to have many minor attacks, the last one having been in September, 1947.

In the absence of any neurologic or psychiatric findings, there is only one conclusion to be drawn from the history, that this man suffers from epilepsy, both petit and grand mal attacks. Whether this man knew the significance of his attacks but still permitted himself to be drafted, or whether there was nothing in his questionnaire or elicited from his examination that indicated his defect, I do not know. I am certain he has no back condition of any importance, and am confident that he has epilepsy.

The dementia praecox group, consisting of 10

cases, represent one-twentieth of the total number and are of interest because all were ambulatory and unattended. The following diagnoses accompanied the authorization papers.

Competent	3
Unclassified	3
Hebephrenic type	2
Paranoid type	1
Mixed type	1

Only 4 of this group had been overseas, while 6 had broken down in the states. None was ever in combat. All were receiving disability benefits ranging from \$13.80 to \$138 a month. It is worthy of note that I found 6 competent and gainfully employed. I considered only 4 incompetent.

Case No. 61—"Dementia Praecox, Unclassified": This case illustrates what extreme worry and fear can do to an individual. This man, 23 years of age, is a body and fender workman by trade. His family and personal histories are negative, with the exception that he got into some minor trouble with the law and quit school after finishing the eleventh grade.

He was inducted into service in January, 1943, and received his basic training and radar work along the eastern sea coast. He was stationed in Florida for 20 months. During the latter part of his duty there, he met a married woman whose husband was overseas. Being single and having no particular moral scruples against fornication, he made her his mistress.

Then came word that he was to be transferred to another center, preparatory to going overseas. He was granted an 8 day leave to visit his home in Iowa, during which time he married. Tearing himself from the arms of his bride, he hastened to the camp where his group was being assembled, much disturbed about going overseas. Then lightning struck twice, suddenly and viciously, in one place. His mistress wrote him that she was pregnant and demanded that he marry her just as soon as she could obtain a divorce. On the heels of this disquieting news, he received a letter from his wife informing him that she had missed a period and was pregnant. The combined news, associated with his dread of going overseas, proved to be the last straw for he "blew his top" and later found himself in the local army hospital. Of the early days of his illness, he recalled but little. He remembered that he fed himself but was afraid to eat at times, because he thought the food was poisoned.

About three weeks after the beginning of his illness, his wife paid him a visit. He remembered her arrival and visits at the hospital. During one of her visits, she went through his personal effects and found the correspondence from the mistress in Florida. When he was confronted with the evidence, he admitted his guilt and requested that his wife divorce him. Fortunately she refused to do so and,

in the words of the immortal Shakespeare, "All's well that ends well," for time quickly proved that neither woman was pregnant. With this good news, and the fact that his group had left for overseas many weeks before, he made a speedy recovery. He was discharged in March, 1945.

On his return home he got a job repairing automobile bodies and fenders. His employer pays him \$190 a month, and the government \$70 in wages and \$13.80 in disability benefits. He appeared perfectly happy and normal. I question the diagnosis of dementia praecox.

Case No. 143: This case is *prima-facie* evidence of how deliberate concealment of facts can secure the induction of a mental defective who, as long as he lives, will be a burden on the taxpayers. When the man, age 28, presented himself for examination, I was struck by his simple trusting look. He had the face of a psychotic person. I could see at first glance that I was dealing with a nut whose shell showed the presence of a worm hole. The man showed evidence of abnormal development, i. e. narrow face with high arched palate, and what had been a double thumb on his right hand, all stigmata of degeneration. I was at a loss to know how this individual had gotten into the armed forces. His complaints were vague and bizarre. He was not keen mentally. He was interested in such things as would entertain a child, the funnies in the newspaper and stories about animals which he picked up over the radio. It was such facts as these that made me wonder how anyone could see any qualities in such a person that warranted his induction into the army. When I asked him how it had all come about, he related his story in a simple and childish manner. In January, 1945, he stated he was a patient in St. Bernard's Hospital, an institution for the treatment of mental patients. There he was given 2 electric and 27 insulin shocks because of his mental condition. When he left the institution, after a three months' stay, he felt much better, so that his relatives thought it would be a good thing for him to get into the army, which would help to make a man of him. So he volunteered and was sent to Fort Snelling, where he was accepted. Fortunately for him, but unfortunately for the government, he did not relate any of his past history as regards his mental breakdown prior to his enlistment. So the government pays this gallant soldier for his few months of service—in its hospitals—\$138 disability benefits and no doubt will continue him on its pension roll as long as he lives.

The next group of cases, 9 in number, were referred for psychiatric examination because of the following nervous complaints:

- Nerves; hardening of arteries.
- Nervousness, 2 cases.
- Nervousness or residuals.
- Nervous condition; skin irritation.
- Instability of autonomic nervous system.
- Nervousness, impairment of vision, bronchitis.

Nervous condition; arthritis, weakness, tremors.

Nervous disorder, malaria, appendectomy.

Two of this number were World War I veterans. Nine had been overseas. Three had seen combat duty; 6 had not. Only 1 was receiving disability benefits; 8 were seeking pensions. Seven were gainfully occupied and 2 unemployed.

I am at a loss to understand why these men were referred for psychiatric examination, for in none did I find any abnormal mental change. In one case of alleged nervousness, I was inclined to believe that the symptoms were best explained on the basis of alcoholism. In 2 cases I concurred in the diagnosis; otherwise, from my point of view, the applicants were applying for disability benefits, using the broad term of nervousness as a lure.

Under the heading of migraine I have listed 7 cases as follows:

- Cephalalagia; pes planus.
- Migraine causing nervousness.
- Migraine.
- Migraine type of headache.
- Headache secondary to concussion.
- Migraine.
- Migraine; back injury.

Of this number 3 had served overseas, 4 had not. None of the 7 had been in combat. Disability benefits in 6 cases ranged from \$13.80 to \$228, and 2 of the number were in college under the G.I. bill. In 3 cases the history plainly indicated that migraine had been present, prior to induction, for five, nine and fifteen years respectively. There are 4 cases in which headache developed after induction. Only in one of these cases were the clinical findings indicative of true migraine. The other 3 cases were spurious; one was of psychic origin; one was due to sinusitis; and one was the result of cerebral concussion. In the three instances where the disease had been present prior to induction, all acknowledged they were sufferers from migraine but concealed the fact from the examiner, because they wanted to go into the armed forces. The following case illustrates this point:

Case No. 55: Male, age 24, college student, complained of "bad headaches." He was inducted into the service in March, 1943. Never out of the states, he was hospitalized in North Carolina for 55 days and then discharged because of migraine. He immediately applied for disability benefits and, within a month, was granted a pension of \$169 a month and a rehabilitation allowance of \$64. With this nest egg at his disposal, he entered college and finished the liberal arts course. At the time of his examination, he was pursuing a course in law at the government's expense.

When I questioned the man concerning the origin

of his headache, I learned that his trouble had begun when he was 10 years of age. It will be recalled that he was 19 years old when he went into service. In the beginning the attacks occurred about once a month. They were always right-sided. The pain usually started behind the right eye and radiated backward to the occipital region. Not infrequently there would be blurring of vision and scintillation of light in the affected eye. Physical fatigue would often provoke an attack. As a rule the attack lasted about 15 hours, and a good night's sleep usually cleared the painful atmosphere. The hereditary background is interesting. His paternal grandfather and a paternal aunt both suffered from sick headache. An older brother has suffered from migraine since childhood.

When I learned these facts, I asked the veteran if he had indicated on his questionnaire, or had told the examiners, that he was a migraineous candidate for the armed forces. He stated that he did not, because he wanted to get into the army and was fearful that he would be rejected if the truth were known. Personally, I have great sympathy for the man who gets into trouble after he becomes a member of the armed forces, but I confess I have only detestation in my soul for the individual who deliberately falsifies and then reaps a financial reward of a generous government which, in my opinion, was not intended for such folk.

It may be of interest to state that the 2 other men who were chronic sufferers from migraine had been patients of mine years ago. Both were told the nature of their trouble at the time they consulted me, yet they intentionally withheld this information at the time of their induction. Apparently they wanted to get into the armed forces, but were not averse to receiving a pension for something they had had prior to enlistment.

The epileptic group, 4 in number, was sent for examination with the diagnosis of grand mal service connected. Only one of the men had been overseas. None had been in combat. All of them were receiving disability benefits ranging from \$13.80 to \$41.40 a month. All were gainfully employed. Three of the cases were service connected; one was not.

Like some of the migraine cases who concealed their defect, one man slipped past the examining board at Fort Snelling, only to arouse the barracks in the dead of night five days later by throwing a major fit. His history reveals that he was subjected to seizures when he was 30 months old, and these occurred from time to time until he was 3 years of age. Seven years later he developed nocturnal attacks, which occurred at intervals. After he was 20 years of age, he began to have seizures in the day time. Also, these were interspersed with minor episodes. He had been treated by his family physician because of these attacks for 9 years prior to induction. He was perfectly cognizant of his dis-

ease but, like some others who were swayed by financial rather than patriotic reasons, retained his counsel and projected himself under the governmental wing that hovered over the United States Treasury.

After his first major fit in the barracks, he was hospitalized. Soon he was sent to the Shick Hospital, where a few days later he had three fits in one day, afternoon, evening and night. He was put on treatment, which was continued until he was discharged Aug. 20, 1945. He returned home, after serving his country for 56 days, and has continued to have his fits as before. A grateful government pays him disability benefits for a disease he has had since childhood.

Neurologic examination was requested in 6 cases. They are listed as follows:

Residuals of chest injury.

Limitation motion of wrist and index finger.

Nerve trouble of right arm.

Fracture of elbow; sciatica.

Pension purposes.

Sacro-iliac injury; hernia.

The records show that 5 of this group had been overseas, but only 1 had been in combat. Disability benefits of \$13.80 and \$27.60 were granted to 2; 3 were seeking pensions; and no rating was given in one instance. Only one case is worthy of mention.

Case No. 148: A male, age 26, an employee of the government, complained of trouble with his right arm and numbness of the back of his hand and fingers. He was injured in March, 1945, while driving a truck in Germany. When the machine ran off the road, he was thrown to the ground and pinned under a front wheel. He sustained a minor injury to his forehead. Later he found that he was unable to use the fingers and wrist of his right hand. There were no fractures. To overcome the wrist drop, evidently due to radial nerve involvement, a splint was applied to the forearm. He was returned to the states in July, 1945, and discharged from the service in January, 1946.

Upon his return home, he went to work as a truck driver; later, he worked in a foundry for six months. He then got a job with the government as hospital attendant and was so employed at the time of his examination. He applied for a pension in 1946, but his application was not granted.

Neurologically, he was entirely negative. He had normal use of his upper extremity. His sensory change was purely subjective. The history of wrist-drop clearly indicates a radial nerve involvement. This condition, however, had entirely cleared up. It was his complaint of numbness involving the entire dorsal surface of the hand and fingers that interested me. Strange to relate, the palmar surface of the hand and fingers, supplied by the median and ulnar nerves, were free from sensory change. The median and ulnar nerves are the chief sensory supply to the hand and fingers. The sensory distribution

of the radial nerve is limited to the dorsal and lateral surface of the thenar eminence, and to the dorsal surface of the thumb and hand, up to the second phalanx of the index and half of the middle finger. The fact that he incorporated the ulnar nerve—as shown by subjective numbness of the skin of the dorsal surface of the little finger (the half of the ring finger and the palmar surface of both ring and little finger were said to be normal), together with subjective numbness of the entire dorsum of the hand and remaining digits—clearly indicates the anatomic impossibility of such finding being due to a radial nerve lesion and shows clearly that the man is a malingerer.

Five men were referred for psychiatric examination in which the diagnosis of neurasthenia had been made. Two were World War I veterans; 3 had served in World War II. Three had been overseas, and 2 had never left the states. None had been in combat. Three were receiving disability benefits ranging from \$13.80 to \$41.40 a month. Two were seeking pensions. Four were employed.

Neurologists have long been aware that neurasthenia is a diagnostic wastebasket, into which, oft-times, are dumped cases that have rather vague symptoms. That the beginning of an organic disease may be ushered in by symptoms of nerve fatigue is well known. The next case illustrates this quite well.

Case No. 75: Male, age 26, station agent, complained of weakness of his legs and fatigability. He originally joined the National Guard in 1940. Later, as a member of the regular army, he was sent to Ireland. Here he noticed that he became weak and tired. He had subjective numbness of left face, arm, trunk and right lower limb. His legs were weak and tired easily. He was discharged 9 months after the beginning of his symptoms, with the diagnosis of neurasthenia.

From a neurologic standpoint the man was essentially negative. All the deep reflexes were preserved, and plantar flexion of the toes was present. The abdominal reflexes were absent. There was no objective sensory change. The ocular findings were negative. His demeanor was such that one could readily place him as a psychoneurotic. Yet the absent abdominal reflexes, the weakness of the lower extremities, and the history of crossed sensory phenomena caused me to be cautious and to suggest the possibility of an early multiple sclerosis. Certainly this case will bear watching.

The next group of cases, 5 in number, were referred for examination because of shrapnel wounds. Of this number, 4 were cited for neurologic examination and 1 for psychiatric examination. The diagnoses which accompanied their authorization papers are as follows:

Shrapnel wound, both arms.

Tinnitus, memory impairment.

Face, scalp, foot.

Face, post-traumatic syndrome.

Right scapular region; Raynaud's disease.

All of these men had served overseas and experienced combat duty. Three were drawing benefits ranging from \$41.40 to \$120.20 a month. Two were seeking pensions. Four were gainfully employed, and 1 was going to college at the government's expense. All of these men had sustained injuries, most of which were minor. The one who had the most to show for his injury—and that was but little—follows.

Case No. 131: Male, age 22, a student mortician, complained of tiring of his right shoulder and aching feet, the latter especially bothering him in cold weather. He was inducted into the service in March, 1944, received his basic training in Arkansas and Georgia, and by December was in Belgium. In January, 1945, he received a gunshot wound which fractured his right scapula. He was hospitalized in Luxemburg for treatment and returned to the states in May, 1945. He was in a hospital for a month and then given 110 days convalescent leave, returning to duty in September, 1945. It was not until May, 1946, that he was discharged from service.

He returned home and within a month was at work in a machine shop. Seven months later he obtained a clerical position in a post office. He continued in the employment of the government until autumn when he got a job as an apprentice mortician. Besides receiving disability benefits of \$55.20 a month, he receives \$100 from his employer and \$65 from the government.

On examination I found nothing wrong with the man aside from two scars in the scapular area, one 2 cm. wide and 10 cm. long, the other 3 cm. wide and 11 cm. long. These were operative scars. They were not adherent, tender or dragging. The function of the upper extremity was normal. There was no deformity. There was a slight tendency for the affected scapula to wing. This condition may account for his complaint of the shoulder tiring easily. For all practical purposes this man has made a full recovery. As for his aching feet, I could find no evidence of Raynaud's disease, as alleged in his complaint. The extremities were perfectly normal.

Thus far, I have given a survey of 179 cases, the vast majority that enter into this report. The remaining 21 cases to be considered now follow.

Depressive Psychosis—3 cases: A carpenter, diagnosed reactive depression following a minor injury to his head, was receiving \$55.20 a month disability benefits while gainfully employed at his trade. He presented no neurologic or psychiatric findings.

A truck driver, who broke down in the African campaign and diagnosed depressive psychosis, was receiving \$138 disability benefits although presenting no evidence of any psychosis. He had fully recovered.

Another carpenter, diagnosed as having a reactive depression secondary to combat duty, complained only of his back bothering him. He had made a good recovery, was at work, but was drawing \$67 a month disability benefits. He showed no inclination to bite the governmental hand that helped to feed him.

Encephalopathy—3 cases: An implement dealer, managing his own business, but drawing \$69 disability benefits, presented no clinical evidence of any brain disorder.

A plumber, who owns his shop, was struck by a bus while in camp. His diagnosis was encephalopathy with post-traumatic syndrome. His story was one of brain injury, i. e. headache, dizziness and blackouts. He draws \$110.40 benefits.

A bus driver, earning \$160 a month and regularly employed, failed entirely to give a history of any head trauma during his service. Close questioning revealed that he had sustained a head injury when he was in a truck accident in 1939. His examination was negative, although he was drawing \$41.40 disability benefits on account of the old injury to his head.

Manic-Depressive Insanity—2 cases: One case is that of a man, unemployed, who became psychotic while working as an aircraft mechanic in North Africa. He made a good recovery but found it hard to get a job because of having had a mental breakdown. No rating of disability benefits was given.

The other case, a trucker and carpenter, had his mental breakdown while stationed in one of the southern camps. He recovered and continued in service until he was discharged in 1946. At the time I saw him, he was emotionally upset and flighty. I regarded him as a candidate for another manic episode and so reported him to the government. No rating was given as to his benefits. He deserves, and should receive, government aid.

Psychosis, Undetermined—2 cases: A man, age 30, became nervous while at the front during the Italian campaign. He was returned to the states and given insulin shock treatment. He made a good recovery and is now regularly employed at a wage of \$170 a month.

A farmer, age 21, after making a parachute jump in Belgium, claimed numbness of both sides of his face, both arms and an injury to his back. He was returned to the states as a case of unclassified psychosis. While in the local Veteran's Hospital, he had a return of his former sensory symptoms, namely, numbness of his arms and face, followed by a fainting spell. The history is strongly suggestive of hysteria. He draws \$41.40 benefits and makes a fair living on his farm.

Neurocirculatory asthenia—2 cases: Two men were referred with the diagnosis of neurocirculatory asthenia. One was a bus driver, regularly employed, who was drawing \$41.40 benefits, because he had been nervous and had felt some peculiar sensations in his chest. Examination showed an enlarge-

ment of the right lobe of his thyroid gland. He had a cough that was aggravated by eating, shaving, washing his neck or palpating the gland.

The other man, age 49, was a veteran of World War I. He claimed he was gassed in the Argonne Forest campaign in October, 1918. He was discharged in January, 1919. He put in a claim and has drawn a pension of between \$80 and \$90 a month since that time. He was regularly employed during all these years in spite of the fact that he was presumably disabled. He was referred for examination, because his osteopathic physician said that his heart was enlarged, his blood vessels hardened, and he was not fit to work any more. Aside from some vasomotor stasis in his upper and lower extremities and a few faked symptoms, I found no clinical changes other than what one might expect in a man who had lived half a century.

The remaining cases, 9 in number, are diagnosed by the government as follows:

Amputation of Left Lower Leg: This man receives \$180 disability benefits a month, although he is employed as a rural mail carrier at a salary of \$2,640 a year. He is neurologically and psychiatrically negative.

Hypochondriacal Reaction: This man has clinical evidence of an early multiple sclerosis, i. e. weakness and numbness of his legs, more in the left one, slight horizontal nystagmus, pallor of the temporal sides of the optic disks, absent knee jerks, slightly present ankle jerks, and a history of visual disturbance—cross-eye—some eight years ago. Although regularly employed, he draws \$41.40 benefits.

Malaria: Why this man was sent in for psychiatric examination with the diagnosis of malaria I do not know. At one time he had received a pension of \$13.80 a month, but it had been discontinued when he was found to be free from malaria. I found nothing ailing him worthy of mention.

Recurrent Injury to the Eighth Nerve: This man, a research worker in one of the colleges in Iowa, was never overseas, nor subjected to combat duty, nor did he give a history of any injury to his ears. It is of interest to note that he has suffered from migraine since he was twelve years of age, and that his mother has been the subject of "bilious headache" associated with nausea and vomiting for many years. He made no mention of his affliction when he entered service. I found no evidence of auditory trouble. His ear drums were intact; he heard the whispered voice at 15 feet, the tick of a fine watch at 30 inches, and tuning forks, C1 to C4 inclusive, equally well in both ears. He was neurologically negative, aside from having migraine. In my opinion, he was looking for a pension through his ears.

Obsessive—Compulsive State: This man was discharged from service and given disability benefits of \$41.40 a month, because he was fearful. He failed to mention at the time he went into service that he had suffered from fears and the compulsion state for some years. His first attack came in civil life

when he was attending church. He was overcome with sudden fear, so much so that he left during the service. He has never stepped foot inside a church since. He has entertained various fears since that episode, but he said nothing about them at the time he went into the armed forces. It was not until he refused to carry a gun in the army that his underlying trouble became apparent. Although gainfully employed as a truck driver, and enjoying excellent health, he is the beneficiary of a generous government and probably will continue to be one as long as he lives. This is one instance where it pays to be afraid.

Bursitis: This man originally injured his arm when he was 5 years of age. To relieve the stiffness of the elbow, an operation was performed some 11 years later. The result was quite satisfactory, but not perfect. He was unfortunate in having the arm injured again when he fell from a jeep while in service. Eventually a bursa appeared over the olecranon process, which, in time, was removed. This left the arm in as good condition as it was prior to the injury. Although employed at a salary of \$140 a month, he draws \$26.70 benefits.

Anginal Syndrome: A veteran of World War I, 51 years of age, alleged coronary heart disease characterized by anginal syndrome as a claim for a pension. He was referred to me for psychiatric examination. He had been examined at the Veteran's Hospital on previous occasions but was given no disability benefits. I discovered that his complaint was not of physical origin but due entirely to an anxiety state associated with chronic nervous exhaustion. For the last 10 years his wife had been a bedridden invalid, and he had to care for her, do many of the domestic duties, and make a living for both. As she became more and more dependent on him, he became more upset in mind. He became conscious of some peculiar sensations in his chest, which he attributed to heart disease—sensations which were just as apt to come on when he was at rest as at work. The various somatic sensations that he entertained were greatly magnified because of his emotional distress.

Psychopathic Personality: This man was in an unhappy mental state when he was drafted. Because of alcoholism, his wife had left him. He wandered about in the west until the draft caught up with him. Some months after he was in service he went A.W.O.L. and eventually found himself on the west coast, where he was picked up by military police and returned to his outfit. He was court-martialed but claimed he was found not guilty, because a psychiatrist testified that, although he knew right from wrong, he had "followed an impulse." He was discharged from the armed forces shortly after the trial. His wife then divorced him, but he soon remarried, taking as his bride a woman 15 years younger than himself. After five or six weeks of married life, she obtained a divorce. He soon made up for this loss by marrying a divorcee.

At the time I examined him, he showed a rather

surly disposition and was indifferent about answering questions. He volunteered the information that he recently had had a "run-in" with a psychiatrist who had treated him rather roughly. Striking back at his foe, he informed him that, of the two of them, the psychiatrist, in his opinion, was more in need of psychiatric treatment than he was. Aside from his absence without leave, he never was in conflict with the law, had always worked and made a living and, in my opinion, would have been an average citizen had he left alcohol alone. He receives \$13.80 disability benefits and \$65 from the government under the G.I. rehabilitation act. He impressed me as being an alcoholic who was dissatisfied with life, rather than primarily a psychopathic personality.

Conversion Reaction: This man was referred for psychiatric examination, with the diagnosis of conversion reaction, chronic. He complained of "throwing up" all the time, especially if he lifted or worked too hard. He was a liability to the government almost from the time he was inducted into service, having been in and out of one hospital after another in the 18 months he was in the army. Apparently no organic trouble was found; all he had to do was vomit to keep out of work or retain a bed in the sick ward. His story is one of nervous indigestion. The chronicity of his symptoms, in my opinion, is due to the fact that he was told nothing could be done for him. Such medical advice in these cases makes recovery practically impossible. He draws \$41.40 disability benefits; also, he has used up most of his unemployment compensation. Again, a grateful government, through its taxpayers, will contribute indefinitely to his keep.

In this report I have presented 200 cases, individually or collectively, that are illustrative of the Veterans Administration problems in neuropsychiatry. The 25 groups into which they have been divided give a fair insight to the general classification into which the ambulatory pensioner falls. It is not the veteran who suffers physical violence either in camp or at the battle front that concerns us—his injuries are obvious and can be fairly appraised—but the veteran without real physical disability. His problem is mental and difficult to appraise in many cases.

Of these 200 consecutive cases, practically 50 per cent are listed as psychoneurotics. This means that the nervous systems of these veterans have not been injured from a physical standpoint. It means that their psychic field has been traumatized by fear, and that the various somatic symptoms that have arisen simply follow in the wake of emotional instability.

We are all cognizant of the role that fear plays in many instances. Its effect may vary from a few disagreeable minor symptoms to total incapacitation. Fear being entirely psychic, there is no panacea for its removal. That is what makes its

treatment so difficult. Undoubtedly, the transition from civil to military life was too strenuous for some of the inductees. They could not stand the gaff, so to speak, and for various reasons broke down nervously. Time after time, I was appalled by the suddenness with which this weakness became apparent. Men who were not subjected to any more danger than the civilian broke down. Men who had braved the terrors of hell at the front and withstood everything the enemy had to offer broke down only after they returned to the states. These findings are significant and need study to determine why some veterans become psychic problems under such circumstances.

The records of these cases show that many of the individuals who broke down early in service, or who had some hidden defect such as epilepsy, migraine, constitutional inadequacy, psychasthenia or schizophrenia, manifested their incompetency within a few days or months after their induction into the armed forces. If all of the selectees had been placed on probation instead of being sworn in, these incompetent people would not be the recipients today of financial aid from the government, but would be made to rely on themselves, or on the community in which they reside.

Again I repeat, a physical defect is apparent if the examiner looks for it. A mental defect may be present but not close enough to the surface for the neuropsychiatrist to detect its presence, especially when time for examination is short, and there is little or nothing known about the past history of the individual. Psychoses, like cancer, seldom are ushered in by grave symptoms. Usually the premonitory symptoms are vague, bizarre and insidious. The psychiatrist is loathe to make a positive diagnosis of mental disease unless proof is ample. The neurologist, also, is aware that oftentimes an organic disease is superimposed on what, in the beginning, was considered a functional disease. It is this knowledge that makes some neuropsychiatrists cautious in expressing their opinion.

We do not know why some individuals develop psychoneuroses and others do not. We do know that there is an instability of the emotional make-up of such a person that is probably an inherent and dominant trait. In war, one's emotions are more apt to be whipped-up than they are in civil life; hence, the great number of psychoneurotics among veterans. If we only knew some way to discern the person who possessed a neuropathic make-up—one which is inherently vulnerable to pathologic breakdown—we could easily cull him from the selectees and thus save the government the great headache it has today in the psychoneu-

rotic veteran. Until that time comes, or until the prospective member of the armed forces is put on probation, there will be no relief from the predicament in which the government finds itself in relation to the Veterans Administration problem. It all adds up to what General Sherman said, "War is hell," and too, I may add, what we all know today, war is waste.

Finally, the individual who purposely falsifies his mental or physical status in his endeavor to become a member of the armed forces should, in my opinion, have no recourse on the government for disability benefits that stem from such defects or disease as were known to him prior to his induction. If the government is made cognizant of these defects or disease and then accepts the man, it should, by all means, pension that individual in case he becomes disabled by reason of such defects or disease. Perhaps, in case of World War III, we will have profited by the mistakes we made in World Wars I and II, or perhaps it won't make any difference, as humanity, in that event, will probably be eradicated from this mundane sphere, and there no longer will be a veteran's problem.

College of Medicine
State University of Iowa
**CLINICOPATHOLOGIC
CONFERENCE**
February 23, 1949

Summary of Clinical Record

This 71 year old white woman was admitted to the Medical Service on Dec. 7, 1948. The history was obtained from the patient's husband. In 1941 the patient began to have numbness of the feet. Walking was difficult because of inability to control the legs. Her family physician diagnosed pernicious anemia and gave her 3 or 4 injections of liver per month from 1941 to December 1948. For seven years the numbness increased and extended up to the waist. On the admission papers, her family physician noted that her response to liver therapy had been poor. About Nov. 1, 1948, walking became so difficult that she required aid. On November 15 she developed a hacking nonproductive cough, which persisted until two days before admission. On December 1 she became bedridden. On December 5 the family physician withdrew 1½ quarts of clear yellow liquid from the right chest. Following this procedure, her breathing became easier

and her cough improved. She had no hemoptysis, chills or fever. She had been intolerant of cold for years. Her appetite was extremely poor, but she had no nausea, vomiting or diarrhea. Constipation had been present for years. There had been no change in her bowel habits and no black or tarry stools. She had lost an unestimated amount of weight. Several days before admission she became confused and unable to remember. There was also occasional urinary incontinence.

Physical examination revealed an emaciated, chronically ill white woman who was unable to cooperate. She had a general memory defect, oriented as to place but not time. The rectal temperature was 98.6 F. The voice was hoarse. The hair was sparse and gray, and felt dry and coarse. The upper eyelids were slightly puffy. The arterioles of the optic fundi were mildly sclerotic. The nasal septum was intact. Hearing was decreased in both ears. A few carious teeth were found, and the breath was foul smelling. The tongue was thickened, moist, and in the midline. The papillae were normal in size and color. The trachea was in the midline, and the thyroid gland was not felt. The breasts were atrophic. Expansion of the chest was limited on the right. Dullness and decreased breath sounds were present over most of the right hemithorax posteriorly. Crackling rales were heard both anteriorly and posteriorly on the right. The blood pressure was 110/60. The precordium was quiet, and there was no cardiac murmur, arrhythmia or enlargement. The radial arteries were sclerotic. The abdomen was protuberant, and loops of bowel were visible. Peristalsis was slightly decreased. Shifting dullness was present in the flanks. A large firm nontender mass was present in the epigastrium and right upper quadrant. The pelvis was normal except for adhesions in the vagina. The rectal tone was 60 per cent of normal. The rectum was filled with soft brown feces; Meyer's test was 1 plus positive. The skin was dry and waxy, and showed evidence of weight loss. Over the sacrum were a few small superficial ulcerations. There was no abnormal pigmentation. There was wasting of the leg muscles but no pitting edema. The biceps jerks were 2/2, knee jerks 0/0, ankle jerks 0/0, and plantar reflexes, flexion/flexion. Pallesthesia was absent only over the feet. Position sense and stereognosis were normal. Tests of pain were unreliable.

Laboratory data taken December 8 showed that the urine was normal, specific gravity 1.020 and acid. The hemoglobin was 9.7 gm. per 100 ml. blood, the erythrocyte count 3,450,000 per cu.mm., and the leukocyte count 10,400 per cu.mm.,

with 89 per cent segmented polymorphonuclears, 10 per cent lymphocytes, and 1 per cent monocytes. The hematocrit was 33 per cent, the platelet count 212,000 per cu.mm., and the reticulocyte count 1.6 per cent. The prothrombin time was 46.2 seconds, and the control 36.3 seconds. A serologic test for syphilis was negative. The blood urea nitrogen was 14 mg. per 100 ml. The total serum proteins were 6.42 gm. per 100 ml., the albumin fraction 3.34 gm., and the globulin 3.08 gm. By roentgenologic examination, there was a pleural effusion of the right hemithorax and possibly pneumonitis or atelectasis in the right base. A flat film of the abdomen showed much fecal material in the colon, with considerable dilatation of the proximal colon by gas.

During hospitalization the rectal temperatures varied from 96 to 99.4 F., with an estimated mean of 97.5 F. The mean pulse rate was about 68, and the mean respiratory rate about 20 per minute. The abdominal distention increased, and enemas were relatively ineffective. On December 10 a flat film of the abdomen showed numerous loops of greatly dilated bowel and a large amount of fecal material in the right side of the colon. Fluid levels were seen. A surgical consultant noted the presence of hyperperistalsis and tinkles in the abdomen. The mass previously described was not felt. Because of the patient's poor condition, operation was not recommended. Decompression was attempted by Miller-Abbott tube. Other therapy consisted of intravenous fluids, parenteral vitamins and intramuscular penicillin. On December 11 the urinary chloride excretion was 5 gm. per liter. Two days later the blood urea nitrogen was 10 mg. per 100 ml., and the creatinine 1.0 mg. The plasma CO₂ combining power was 47 mg. per 100 ml. (22 milliequivalent/liter). The plasma chlorides were 515 mg. per 100 ml. (87 milliequivalent/liter); the serum sodium was 270 mg. per 100 ml. (117 milliequivalent/liter); and potassium 24.6 mg. (6.3 milliequivalent/liter). The urinary output was 700 ml. in the terminal 24 hours. Abdominal distention was not relieved satisfactorily by tube or enemas. Her course in the hospital was one of gradual deterioration; death occurred Dec. 13, 1948.

Clinical Diagnosis

Myxedema with questionable associated intestinal obstruction.

Dr. Mayo Soley (Dean, College of Medicine): I believe Dr. DeGowin told me in part about this patient before I read the protocol, and our diagnoses happened to agree. The patient today is a 71 year old white woman, whose history is somewhat confused. I would like to ask Dr. Sheets

one question. Did this patient's symptoms of coldness, constipation and other similar ones come on coincidentally at the time she had the diagnosis of pernicious anemia?

Dr. R. Sheets (Medicine): I can't answer that.

Dr. Soley: In any case, this patient, seven years before admission, began to have symptoms of numbness of the feet, with difficulty in walking and controlling her legs, and had the diagnosis of pernicious anemia made by her physician. She apparently did not respond to liver injections, and, over a period of seven years prior to her entry, the numbness increased and apparently the anemia was not entirely relieved. Not long before her entry, she also developed a cough that was partly due to the pleural effusion in her right chest and may also have been due to an underlying process within her lungs. Her dyspnea and cough did improve with the withdrawal of the pleural fluid. She had had no signs of any frank infection, but I think that should not influence one too much in a patient who has a low basal body temperature and who is 71 years old, because infections can go on without any frank clinical manifestation, or without necessarily a rise in the body temperature to fever levels. In addition to this history, we found that she had been intolerant of cold for many years, had poor appetite, had been constipated, and had lost a good deal of weight, although the amount is unknown. Apparently, she had some memory defect and, in the days before her entry to the hospital, had been confused. There was also urinary incontinence.

On physical examination, a chronically ill, emaciated patient presented herself, with a memory defect and with a slightly low rectal temperature. She had a hoarse voice, sparse, grey, dry, coarse hair, puffy eyelids, sclerotic vessels in her retinae, decreased hearing, carious teeth, a thickened tongue with normal papillae (which is certainly against the diagnosis of pernicious anemia), and a thyroid gland that was not felt. In all honesty we have to say that most thyroid glands are not felt unless they are felt for very carefully, and I should think with this clinical picture one would certainly feel carefully. Even then it was not palpable. She had atrophic breasts, which would not be out of line with her age. She had signs of fluid in her right chest, and she had rales, particularly on the right side. Her blood pressure was normal. The radial arteries were sclerotic. She had a protuberant abdomen with visible loops of bowel with shifting dullness, which was either fluid within these loops or within the peritoneal cavity outside these loops. The firm tender mass which was apparently felt in the epigastrium and

right upper quadrants sounds suspiciously like liver, and probably was, but did not necessarily have to be enlarged. The pelvis was normal except for vaginal adhesions. Someone is calling rectal tone rather closely, I should think, to say it was 60 per cent of normal. There was nothing particularly abnormal about the rectum. The skin was waxy and dry, and showed the evidence of weight loss previously noted. She had some superficial ulcerations over her sacrum, probably from having been in bed. There was abnormal pigmentation and I suppose that includes carotenemia. She had no pitting edema. The reflexes in her knees and ankles were absent, but she had normal plantar reflexes. She had absent vibratory sense over the feet only. I think we should point out that in people of this age the vibratory sense may be absent even higher than the feet without necessarily finding any lesion in the posterior or lateral columns to account for it. Her position sense was normal, and she could recognize objects but could not be tested for pain.

These findings are quite consistent with a patient who has myxedema, and we should not allow the weight loss to influence us in deciding that she did not have this disease. It is also well known that the anemia in myxedema can be hyperchromic as well as hypochromic, but the incidence of pernicious anemia and myxedema is no different from the incidence one would expect to find in one person, considering the incidence of either disease in the general population. James H. Means and others have reported at least 3 patients, that I know of, with the combination of pernicious anemia and myxedema. It is very much the same as diabetes and myxedema, as far as the incidence is concerned.

The patient had a normal urine. Her hemoglobin was somewhat low, 9.7 gm. She had an erythrocyte count of 3,450,000, which, I take it, makes it nearly normochromic. It is probably not hyperchromic, and there is no recorded statement about the character of the red cells. She did have a leukocytosis with a shift to the left and a decrease in the number of lymphocytes, which I think is quite significant in this patient and probably means she does have an infection. The most likely place would be in her lungs, since she did not have signs of real intestinal obstruction at the time of entry. The rest of the blood count does not help a great deal. Her prothrombin time was not abnormal compared to the control. She had no evidence of lues to account for the changes in her reflexes. The blood urea nitrogen was normal. The serum proteins were within the normal range. Perhaps her globulins might be a little

bit up. And she had the radiologic evidence of pleural effusion, which we knew she had clinically, with the added point of possibly a pneumonitis or atelectasis in the right lower lobe as well. Apparently, a flat film of the abdomen did show dilatation of the proximal colon with gas and fecal material. I think, incidentally, that it is quite easy to confuse shifting dullness from intraperitoneal fluid and from fluid in the loops of bowel in such a patient. Apparently, this patient's rectal temperatures went from below the normal range to only a height of 99.4 F., but, with a swing of that sort, I think we can presume there must have been some sort of infection or inflammatory process going on. The pulse rate was slow; the respiratory rate, I'd say, a little bit rapid for this type of patient, which would fit with the findings in her chest. In the hospital, her abdominal distention increased and was not relieved by any of the measures tried. It was noted that hyperperistalsis and tinkling peristalsis were heard during her hospital stay. With this distention, the liver was no longer palpable, or at least the mass in the right upper quadrant wasn't, which would fit perhaps with its having been pushed up along with the diaphragm by the gas in the distended bowel.

In spite of the supportive treatment, which included all the things one might expect to do in such a patient, she went downhill and died, showing at the end some evidence of sodium deficiency, which could well be due to loss of fluid and sodium into the gut, since there was not more than a normal amount being lost through the kidneys. I think this course is one quite consistent with myxedema. I think that the patient's body temperature fits with this picture. I think the finding of the anemia fits. I don't think we are able to say whether or not this patient had a coincident Addisonian type of anemia or whether the symptoms in her lower extremities were part and parcel of the myxedema. Certainly numbness and tingling, but usually not ataxia, go with total thyroid deficiency and probably are best explained by myxedematous infiltration within the nerves, just exactly like that which occurs in muscles (whether it be smooth or skeletal muscle), within the skin, within the periarticular tissues and other parts of the body, including the brain, which also could have been found probably to have some cerebral arteriosclerosis to account for the cerebral symptoms manifested by this patient. We cannot say that this patient had a low enough blood count, hemoglobin, to account for her cerebral symptoms on the basis of oxygen deficiency of a cerebral sort per se. I don't know what we are going to

find in the nervous system. I still feel that we don't have to have the findings of the combined system disease. I would expect, however, to find some evidence of infection in the lung. I don't think we necessarily have to find any evidence of obstruction in the gut. I think her distention could come from the process itself, although we have stubbed our nose a couple of times recently on patients around here on that point. I well recall one patient whom I happened to have some years ago, who was reported as "O.D." in Dr. Means' textbook on *Thyroid and Its Diseases*, who died with myxedema, with a myxedematous change in her heart, in addition to sclerotic coronary vessels and rheumatic valvulitis. She also had a small carcinoma in her bronchus and an adenoma, which Tracy Mallory was unwilling to call an adenocarcinoma of the pancreas. So, while it is possible that this patient may have some other lesion than just the distention from what I think is her primary disease to account for the bowel symptoms, I would say that we don't have to expect that at all.

In summary, this patient probably does have myxedema. Her whole course over the seven years is quite consistent with it. Her deterioration is accompanied by a pleural effusion, which may be part of this myxedema and doesn't have to come from any infection. The infection is perhaps due then to the fact that she had an atelectatic lung and a lowered resistance to infection, as patients of this sort have, and the swing in her body temperature, even though it didn't go high, was probably a reflection of this process. I would suspect also that the best judgment would be that the distended bowel is not due to a tumor, or some other cause of obstruction, but to myxedema.

Dr. C. Gillies (Radiology): A film of the chest shows the left lung to be clear except for an area of linear atelectasis. We were not able to determine the size of the heart because of an effusion on the right side. Even though there was fluid in the right pleural cavity, there was apparently no shift of the heart and mediastinum, so we felt that there was an accompanying atelectasis of a portion of the lung on the right side. The underlying lung was, of course, obscured by the overlying fluid.

A flat film of the abdomen demonstrated gas distended loops of small and large bowel as well as gas distention of the stomach. On the original film, we were able to see that the distal colon contained large quantities of fecal material, and, while distention of bowel is one of the cardinal signs of intestinal obstruction, it is also true that

distal to the obstruction, the bowel is empty, providing the obstruction has been present for any length of time. That is, the peristaltic waves carry through the obstruction, so that fecal material is emptied out distal to the obstruction. Because of the presence of this large amount of fecal material in the distal bowel, we felt that either this patient did not have any intestinal obstruction, or that the obstruction was on the

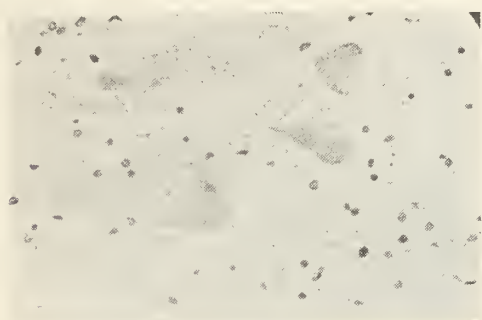


Fig. 1. Spinal Cord: Posterior Horn. Myelomalacia.

basis of a fecal impaction alone, and, therefore, reported this examination as showing no evidence of mechanical obstruction of the bowel.

Dr. Soley: Dr. Gillies, did you make any remarks about that heart?

Dr. Gillies: No, we did not. We were not able to see the right border.

Dr. Soley: The reason I ask is that so many of these patients have either a myxedematous dilatation of the heart muscle or, as has recently been reported, a pericardial effusion.

Dr. Gillies: This patient was not fluoroscoped. Patients with myxedema usually show an atonic heart.

Dr. Soley: Could you see any edema?

Dr. Gillies: No, I could not.

Dr. Soley: There is one other point that could be brought out in severe hypothyroidism and myxedema. There has been shown, in association with carotenemia, hepatic insufficiency. The antagonism between thyroxin and Vitamin A or the carotenes has long been known. Whether the carotenemia is due to hepatic damage and failure to connect carotenes to Vitamin A is not at all certain.

Dr. S. Ziffren (Surgery): When you have a patient in this age group with intestinal obstruction, there are several questions that have to be answered. The fact that she showed gas in her bowel doesn't necessarily mean that she had a mechanical intestinal obstruction. Gas in the bowel can also signify a paralytic ileus. I don't know of any condition in which it is more important to have an adequate history and physical

examination than in trying to make a diagnosis of intestinal obstruction. It is not enough to make a diagnosis of intestinal obstruction on the basis of hyperperistalsis or because the examiner thinks he hears tinkles. You've got to have something more than that. If this patient had a mechanical intestinal obstruction, we ought to know if it is a partial or a complete obstruction. If she had a mechanical intestinal obstruction, we ought to know if it is a simple obstruction or a strangulating obstruction. The typical history and signs in a patient who has acute mechanical small bowel obstruction is that of intermittent, crampy, abdominal pain, with vomiting and borborygmi that increase in intensity and occur synchronously with the crampy abdominal colic. Of course, this picture is entirely absent in this patient. The x-ray showed distention of the large bowel as well as the small bowel. Now, ordinarily, if the patient has an obstruction in the distal reaches of the large bowel, it is a closed loop obstruction, but, if the ileocecal valve is incompetent, and it is not very often incompetent, then you find some gas also in the lower reaches of the ileum. We have to conclude, at least from the film, that, if she had a mechanical intestinal obstruction, it was in the lower end of the large bowel. Incidentally, vomiting is quite infrequent in patients with large bowel obstruction, even with the most extreme distention. If she had a mechanical intestinal obstruction, there are certain conditions we would have to think of. The most common lesion in this group would be a carcinoma and, of course, that would be ruled out by palpation, sigmoidoscopic examination, or by barium enema.

A stricture of the large bowel can also occur in the lower reaches, and it is secondary not infrequently to a diverticulitis or rarely to an infarction of a small segment of colon which survives by revascularization through a piece of omentum. An acute mesenteric thrombosis certainly doesn't present these symptoms. There are no murmurs. There is no fibrillation indicating any vegetations or thrombi in the left auricle. Ordinarily, acute mesenteric thrombosis has severe abdominal pain, vomiting, diarrhea, and frequently associated blood in the emesis or in the bowel movements. But, in a few cases, they pursue a mild course for a few days before you realize the serious import of their illness. Very rarely do they present the phenomena of mechanical obstruction, and they almost always present the signs of peritoneal irritation. Incidentally, the signs of peritoneal irritation were completely absent in this patient, namely, tenderness and rigidity, but a patient rarely can have peritonitis and

not be so overcome by the infection that he doesn't show any of the signs. An incarcerated or strangulated hernia might have to be considered in a case like this. Ordinarily, you would find a tense, painful, tender mass at one of the hernial orifices with the signs of intestinal obstruction. If a patient, however, had a hernia into one of the hidden orifices of the body, an internal hernia, then you would have a difficult time.

One of the conditions that could occur in this age group would be a volvulus. These patients ordinarily have tremendous distention. They may have a history of a previous episode from which they had recovered. Ordinarily, they have crampy pains, tenesmus, bloody mucus in the rectum, and they usually assume a particular position in bed, in which they have complete relief from their pain. Apparently, when they lie in that position, they lessen the traction on the mesentery. Of course, here again, if you did a barium enema, you would see the so-called "spade" sign. Adhesions and bands can cause intestinal obstruction. Ordinarily, it is small bowel, and they usually give a history of a previous surgical operation. However, it can occur in the complete absence of abdominal scars.

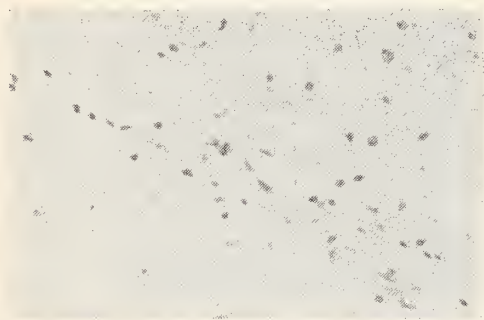


Fig. 2. Spinal Cord: Lateral Column. Arteriosclerosis and Myelomalacia.

An obstruction due to obturation is usually due to a gallstone which proceeds down a fistula between the gallbladder and the duodenum. Here again you would have a previous history of gallbladder disease and possibly a recent severe attack. The obstruction, however, ordinarily occurs in the lower ileum, because here the diameter of the bowel is at its smallest. Again you might take an x-ray film and even see the stone in the bowel, or you might see air visualized in the biliary tree which would be very suggestive. Another condition that might produce such an obstruction would be an extrinsic mass, perhaps a pelvic tumor or tumor of the mesentery, but here the obstruction is almost always partial in character.

I can't think of any other cause of mechanical obstruction that we would have to consider in a

case like this, but there are two other conditions that we must consider. One, of course, is a paralytic ileus, in which you have no abdominal colic nor crampy pain, and in which hordorygmi on auscultation are either rare or absent. It can be caused by any form of trauma, peritonitis, injury to the spine, injury to the central nervous system of any kind, or following any operative procedure. And, lastly, I take the liberty of calling a condition metabolic ileus, which can occur in hypothyroidism, in which you have obstinate constipation and extreme abdominal distention,



Fig. 3. Spinal Cord: Demyelination and Myelomalacia, Dorsal and Lateral Columns.

accompanied by the symptoms and signs of severe hypothyroidism.

Dr. Sheets: The clinical diagnosis was myxedema with the abdominal symptoms associated with that. We didn't think that the neurologic manifestations necessitated a separate diagnosis, feeling that they were partly due to the myxedema and arteriosclerosis found in a patient of this age. The lesion in the chest was not definitely identified. We went on the assumption that it was a pneumonitis and treated her with penicillin. There was no definite diagnosis of that lesion.

Dr. Wm. Bean (Medicine): Would therapy with thyroid substance have been indicated, or was it far too late to have done any good?

Dr. Soley: I think you could say it was far too late to have done any good, because, if one gives thyroxin intravenously, the effect would have been the same as that from a large oral dose of desiccated thyroid. The maximum effect of a single dose comes somewhere between the seventh and fourteenth day, and she was dead by that time. Another thing might be brought out, had this patient truly had addisonian anemia, she would not have had a complete response to the liver therapy in the presence of myxedema.

Student: Were there any iodine determinations carried out?

Dr. F. Stamler, Pathology: No, there were not.

Student: Any sputum examinations?

Dr. Stamler: No.

Dr. J. Embick (Medicine): What was the blood cholesterol level?

Dr. Stamler: The cholesterol level of postmortem blood was 150 mg. per cent. I can't say how that would compare to the antemortem blood.

Necropsy Findings

The thyroid was small and fibrotic, with extreme atrophy of glandular elements. The skin and subcutaneous tissues of the extremities and periorbital regions presented findings compatible with myxedema. Microscopic examination of cardiac musculature also showed basophilic degeneration suggestive of this condition.

The lungs were involved by several disease processes. The right lower lobe contained an abscess, and there was chronic empyema of the right pleural space. There was also extensive lobular pneumonia of the right lung, with rather conspicuous lipoid elements. There was, in addition, a left hydrothorax.

There was advanced atherosclerosis of larger arteries of the body, with rather conspicuous coronary and cerebral artery involvement. The heart was only mildly enlarged (400 gm.) but showed the previously mentioned basophilic myocardial fibers. There were arteriosclerotic scars of the kidneys.

The spinal cord showed extensive areas of demyelination and early necrosis, apparently due to ischemia caused by extreme sclerosis of spinal arteries. This process affected large and small arterial vessels of the cord, with hyaline thickening of walls and extreme narrowing of vessel lumina. The brain was somewhat atrophic (1,250 gm.) but did not show softening.

Two causes for abdominal distention were found. The abdomen contained 3,000 cc. of clear fluid, with no demonstrable cause of ascites. In addition, the colon was distended by large amounts of fecal material.

The extensive pulmonary disease was probably the immediate cause of death.

Necropsy Diagnoses

Myxedema.

Atrophy and fibrosis of thyroid.

Pulmonary abscess, right lower lobe.

Empyema, right.

Lobular pneumonia, right lung.

Hydrothorax, left.

Atherosclerosis, generalized, severe.

Ischemic necrosis, spinal cord.

Cerebral atrophy.

Cardiac hypertrophy, mild, with myocardial degeneration.

Arteriosclerotic scar of kidneys.

Ascites.

Fecal impaction of colon.

Anemia (clinical).

Dr. Stamler: There were some interesting necropsy findings in this case, with considerable anatomic evidence to support the clinical diagnosis of myxedema. The thyroid gland was small and atrophic, each lobe measuring approximately 2 by 1 by 0.8 cm., grossly. It was firm and fibrotic in consistency, with little evidence of glandularity. On section this organ was seen to consist of dense fibrous tissue containing small foci of atrophic thyroid, with lymphocytic infiltrations surrounding these areas. There was also the myxedematous condition of the extremities and the periorbital tissues, as mentioned in the clinical protocol. These tissues did not, however, show any pathognomonic, microscopic changes. There



Fig. 4. Thyroid, Showing Extreme Atrophy and Fibrosis.

were degenerative changes of cardiac musculature and to some extent skeletal musculature, such as have been described in cases of myxedema. There were no other major lesions of endocrine glands, although the pituitary did have a small cyst of the pars intermedia. This did not appear to be seriously encroaching upon the rest of the gland, and there was no anatomic evidence of generalized pituitary deficiency. The lungs were extensively involved by disease processes. There was a chronic lobular pneumonia of the right lung, with an abscess of the lower lobe and a chronic empyema of the right pleural cavity. The left lung showed some congestion, and there was a left hydrothorax. The pneumonia was chronic in type, with considerable lipoid deposition in alveoli and interstitial tissues. The abdomen contained 3,000 cc. of clear fluid. There was no evidence of peritonitis, and the mechanism of ascites was not apparent. The liver weighed 1,360 gm., which is within normal weight range for an individual of this age and sex, and was essentially normal except for a few foci of inflammation such as might accompany any systemic infection. The spleen was also quite small. There were no

findings in these organs to indicate congestive cardiac failure as the basis of the ascites, and there was no evidence of cirrhosis. There was considerable arteriosclerosis throughout the body, including a rather advanced atherosclerosis of the aorta and the large arteries, including those of the brain, heart and kidneys. There was also a pronounced sclerosis of the spinal arteries and the arterioles of the spinal cord. Coincident with this, there were extensive lesions of the spinal cord, consisting of areas of demyelination, sclerosis and recent softening. These tended to take the distribution of the subacute combined degeneration of pernicious anemia, but were not altogether typical of those found with that disease. In view of the extreme degree of sclerosis of the spinal arteries and arterioles, it is possible that the lesions were entirely on a vascular basis, or at least were due in part to this condition. Another cause for the abdominal distention was the accumulation of large amounts of fecal material within the colon. The colon was dilated and distal to the midtransverse portion; the fecal material was quite hard and more or less impacted.

Dr. Soley: Were there any signs in the stomach indicating pernicious anemia?

Dr. Stamler: I'd classify it as merely atrophy, such as you find in many persons of that age. The mucosa was somewhat atrophic, but I don't believe it was diagnostic.

Dr. Soley: How about the bone marrow?

Dr. Stamler: The bone marrow was perhaps a little abnormal but certainly showed maturation of red cells. There was perhaps a paucity of myelocytic elements, which possibly was due to exhaustion from the infection she had.

Dr. C. Millikan (Neurology): Was there more, or less, involvement of the dorsal spinocerebellar tracts than the corticospinal tracts?

Dr. Stamler: I think there was probably a little more involvement of the corticospinal tracts, but I can't be too positive about that.

Dr. Millikan: Are you implying that vascular disease in any one vessel could produce this?

Dr. Stamler: I don't believe it could in any one vessel. There was such an extensive, widespread involvement of the vessels here that it could be explained on that basis. On the other hand, it would seem that certain areas were hit rather selectively, a little too much so to be explained on a vascular basis. I certainly can't be dogmatic about it at all.

Dr. Soley: How about the nutrient arteries in the bone marrow? Were they abnormal at all?

Dr. Stamler: There was some sclerosis of the arteries of the bone marrow. There was con-

siderable arteriosclerosis of many organs, although it wasn't severe in most places. The vessels of the adrenal, for instance, were somewhat sclerotic, and those in the kidney, but not particularly severely. I'd say those in the bone marrow were among those that showed the process rather well.

Dr. Soley: I have seen one patient in which arteriosclerosis of the nutrient arteries of the bone marrow might explain better the apparent picture of pernicious anemia than vascular involvement of the cord itself.

There is one thing that has been bothering me for a long time. Thyroid is used probably more than any other drug except aspirin, and yet patients with myxedema are so often misdiagnosed. I just don't understand why the diagnosis is not made earlier, because probably no disease is easier to diagnose, nor is any other disease easier to treat. I think it behooves us, with the material that we have here in this hospital, to learn so thoroughly the manifestations of chronic hypothyroidism or myxedema that none of us misses the diagnosis in these patients.

One other point is that the presence of isolated effusion in the peritoneal cavity, or the pleura may be one of the manifestations of myxedema. Probably Roberto Escamilla of San Francisco in the *Journal of Clinical Endocrinology* has reported these signs better than anybody.

Dr. Ziffren: I don't have much to add, but I shall summarize this problem. The classic picture of myxedema almost always includes obstinate constipation and very often an associated abdominal distention. The distention may well be the presenting sign in a patient with myxedema. Ordinarily, this distention is limited to the large bowel but may include the small bowel also. It may develop slowly with increasingly severe constipation and progressive abdominal distention, or sometimes it develops very acutely, often following an infection. It is not too unusual to see ascites, or even atony of the bladder. If these patients are extremely ill, they may succumb to an intercurrent infection and lapse into coma. The pathologist sees a distended bowel with elongation. The wall is white and thick, edematous, lacks elasticity, and has even been described as approaching the consistency of shoe leather. Microscopically, all that you see is atrophy of the mucosa, with some infiltration of the submucosa with plasma cells and lymphocytes. I don't know what the etiology is. However, it is well to note that practically every case of hypothyroidism has an accompanying constipation, and, if you give experimental animals or man thyroid extract, there occurs an increased tonus in the bowel. Whenever a pa-

(Continued on page 219)

STATE DEPARTMENT OF HEALTH

Walter Diering

HIGH INCIDENCE OF RABIES CONTINUES IN IOWA

As of March 12 we reported 57 positive examinations for rabies in animals in Iowa in 26 counties. The increase continues both in case numbers and in counties reporting the disease. To date, April 14, totals have swollen to 84 animal cases from 35 counties, with the following distribution:

County	Number	Animals
Benton	4	3 cows, 1 horse
Black Hawk	3	1 skunk, 1 cow, 1 dog
Boone	1	1 skunk
Buena Vista	1	1 pig
Calhoun	1	1 cow
Clinton	2	2 cows
Crawford	1	1 cow
Dallas	2	2 dogs
Decatur	2	1 dog, 1 skunk
Delaware	1	1 cow
Dickinson	1	1 horse
Emmet	1	1 dog
Floyd	2	2 cows
Fremont	1	1 fox
Greene	1	1 dog
Guthrie	2	1 cow, 1 cat
Iowa	2	1 cat, 1 horse
Johnson	4	3 skunks, 1 dog
Jones	2	2 skunks
Linn	2	1 cow, 1 skunk
Mahaska	1	1 cow
Marshall	1	1 cow
Montgomery	1	1 cow
Muscatine	2	1 cat, 1 skunk
Palo Alto	2	1 cow, 1 skunk
Pocahontas	2	1 skunk, 1 cow
Polk	25	20 dogs, 3 cats, 1 bull, 1 raccoon
Pottawattamie	1	1 raccoon
Poweshiek	1	1 cow
Story	2	1 cat, 1 cow
Tama	2	1 skunk, 1 calf
Van Buren	1	1 skunk
Warren	3	2 raccoons, 1 cow
Webster	3	1 cow, 2 dogs
Wright	1	1 cow
TOTAL	84	

The number of cases reported by months is as follows:

January	February	March	April
13	27	25	19 (Through April 14)

There is little doubt that the total of 95 cases reported for the entire year of 1948 will have

been exceeded by the number of positives for the first four months of 1949.

Our only effective control measures are those of vaccinating all dogs as a routine procedure, and tying or penning up every dog in any area where rabies is present. While the reservoir of infection of our Iowa rabies appears to be wild animals, such as skunks, foxes and raccoons, it is usually the dog that forms the liaison between it and man. Therefore no real control over the disease can be exerted until dog owners are educated to the truth that the freedom of their dog is a matter that must readily be sacrificed if rabies is to be suppressed.

OCCUPATIONAL, HOME AND PUBLIC ACCIDENTAL DEATHS IN IOWA 1940-1948

Accidents rank as the fourth case of death in Iowa, being outranked only by heart disease, cancer and cerebral hemorrhage.

A classification of accidental deaths for the years 1940 through 1948 is given in the following table:

	Total Accidents	Occupational Accidents	Home Accidents	Motor- Vehicle Accidents	Other Public Accidents	Unclassi- fied Accidents
1940	1,763	186	794	559	215	9
1941	1,830	208	734	631	234	23
1942	1,701	212	811	425	238	15
1943	1,733	159	895	318	345	16
1944	1,669	143	822	354	343	7
1945	1,706	203	894	388	216	5
1946	1,856	206	795	575	260	20
1947	1,920	192	846	600	221	61
1948*	1,954	190	880	610	237	37

*1948 data are provisional.

There was an increase in the number of accidental deaths in Iowa in 1948 as compared with 1947. This increase, while not great, is nevertheless alarming, since it reflects a continuation of the upward trend in the number of accidental deaths during the postwar period.

Accidental deaths declined during the war years, but have been increasing every year since 1944. The decline in accidental deaths during the war years is accounted for in large part by a decrease in the number of motor vehicle accident fatalities.

Lower speeds and less travel, due partially to gas rationing, undoubtedly accounted for this.

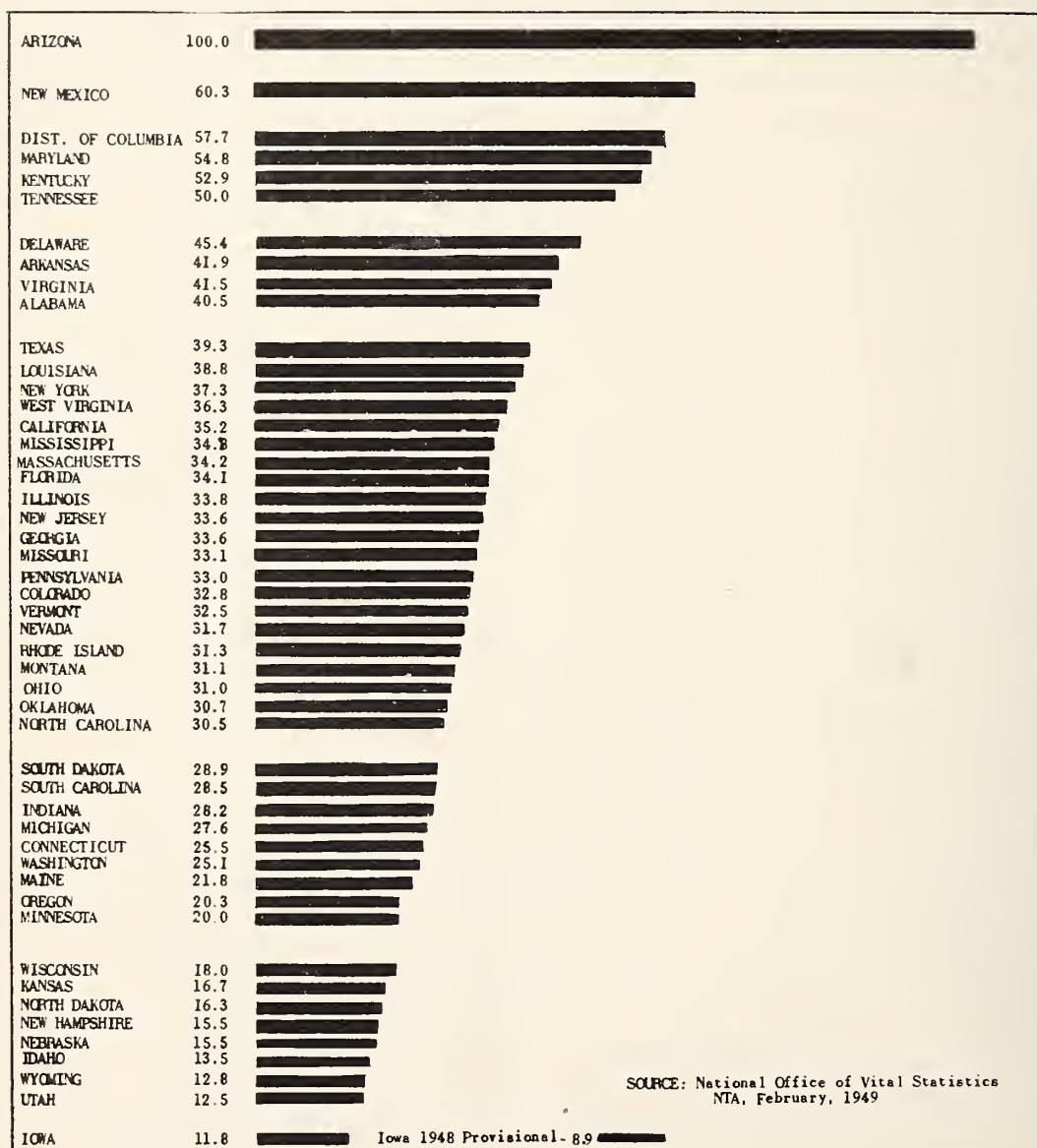
Further analysis of accidental deaths reveals that most fatal accidents occur in the home, motor vehicle accidents are next, followed by other public accidents, while occupational accident fatalities are the smallest group of classified accidents.

Any program aimed at reducing the number of accident fatalities might logically be directed toward reducing motor vehicle and home accidents, since these two groups constitute about 75 per

cent of all accident fatalities. However, the possibilities of reducing home accidents may not be as great as it might seem on the surface. This is due to the fact that approximately 70 per cent of all home accident fatalities are due to falls, and, of these fatal falls, more than 90 per cent occur to persons 65 years of age and older. The information at hand indicates that many fatal falls among older persons are often due primarily to infirmity rather than to any very definite external factor.

TUBERCULOSIS DEATH RATE PER 100,000 POPULATION AMONG RESIDENTS OF EACH STATE—1947

Death Rate for the United States—33.5



SOURCE: National Office of Vital Statistics
NTA, February, 1949

The JOURNAL of the Iowa State Medical Society

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No. 5

Annual Meeting

The Ninety-Eighth Annual Meeting of the Iowa State Medical Society, which concluded on April 21, 1949, proved to be a successful session in many ways. From the attendance viewpoint, the official records indicate 870 members, 108 guests, 175 woman's auxiliary, and 130 exhibitors, to a total of 1,283 persons.

The JOURNAL desires to congratulate the Program Committee in the selection of its guest speakers and for the variety of subjects presented. As usual, the July JOURNAL will carry the official notes of the Transactions of the House of Delegates. For the benefit of those who were unable to attend the meeting, the outstanding papers will be published in forthcoming issues during the year. Dr. Thomas F. Thornton, of Waterloo, was designated as President-Elect of the society. Burlington was selected as the site of the 1950 meeting, which will mark the centennial of the Iowa State Medical Society, the first meeting having been held in Burlington in 1850. Sioux City was selected as the host for the 1951 meeting.

All members who attended the technical and scientific exhibits were well rewarded in the quality of this year's presentations. Space for commercial exhibits was, as usual, at a premium.

Again we thank those who were responsible for making the meeting one which will be memorable. The fact that the House of Delegates ap-

proved an increase of dues to \$25 should make it possible for the society to carry out the heavier demands facing us during the coming year without a deficit. Members of the society will be pleased to know that the Historical Committee was authorized to prepare a centennial volume covering the history of medicine in Iowa. This book will be presented to all members of the society.

We urge everyone who was unable to attend the 1949 meeting to try and meet with the society in Burlington in 1950.

Medical Needs of Armed Forces

A critical professional manpower shortage will soon develop in the medical departments of the armed forces. It is estimated that during the month of July the shortage will amount to 1,600 physicians; by the end of the year, this shortage will grow to 2,200 physicians. The Secretary of Defense has indicated growing concern because of difficulty in recruiting volunteers to fill the vast number of vacancies that will arise during the remainder of 1949. This concern is limited primarily to the replacement of physicians who have completed their tour of duty with the armed forces, and who now desire to return to civilian life in order to practice their profession.

Young physicians who received their medical education during the war years and who have given no service to the armed forces have been especially urged to consider their obligations to the millions of persons concerned. Certainly no one would welcome enactment of draft legislation to make up this serious deficiency. The Council on National Emergency Medical Service of the American Medical Association has suggested the possibility of deferring residencies in hospitals in which contracts have already been made with men who have not had military service until such service has been completed. During this interval these hospitals should easily obtain temporary replacements by utilizing the services of physicians who have completed their military service.

Physicians who now volunteer would be entitled to receive \$100 a month in addition to prescribed pay and allowances for their rank.

Physicians in Iowa who have not completed military service are urged to seriously consider their moral obligation in view of the extreme shortage which will develop in the armed services within the year.

Safe Milk

According to the National Dairy Council, the past eight years have shown a progressive decline in the number of outbreaks of disease due to milk and milk products, and reached a new low in 1946 from the time when such records were first made in 1923. In the same period, however, diseases caused by other foods have increased, being six times more numerous than those caused by milk and its products.

This reward of the efforts of the dairy industry and the public health authorities to keep the milk supply safe is largely the result of significant increases in the pasteurization of milk. This is brought out by the fact that nearly 90 per cent of milk-borne disease outbreaks were due to unpasteurized milk (1938-1946). The greatest number of these occurred in cities with a population of under 10,000, where only 39.3 per cent of the milk was pasteurized according to the 1936 figures, being two-thirds of the total number. In cities of over 500,000, where pasteurization is almost 100 per cent, the chance of contracting a disease from milk is slight, only 1 outbreak occurring in 1946 in all cities of this size. More than 550 cities in the United States now require pasteurization of all milk sold, or all except certified milk, and action on a statewide basis has been taken by Utah, Michigan and Colorado.

Pasteurization is also employed as a safety measure for other milk products such as cheese and ice cream. Any nutrient losses which may occur through pasteurization are negligible and not significant in the average American diet composed of a variety of foods.

Of importance also to safe milk is the health of the dairy cow. Dairy farmers have been co-operating with federal campaigns to control the two most serious diseases of cattle communicable to man, e.g. bovine tuberculosis and brucellosis (undulant fever), a campaign that has been extremely successful in eradicating the diseases from dairy herds. Moreover, pasteurization destroys both these disease organisms when they do occur.

The consumer as well has a responsibility for prevention of disease outbreaks to insist upon adequate control ordinances pertaining to sanitation and pasteurization, and to buy only that milk that conforms to those standards. Carelessness in the handling of the milk by the consumer after he buys it can, however, nullify all the efforts that have been made by the dairy industry and the public health authorities to furnish the consumer with safe, pure milk.

Socialized Medicine in England

In spite of continued articles in the daily press emphasizing the pleasure of the people of England in the program of socialized medicine as now being carried out in that country, certain trends are obvious that all is not well with this program.

Recently, in the Cleveland *Plain Dealer*, Mr. Philip W. Porter reported as follows:

Dr. John Bull

"You don't have to listen to the perfectly legitimate objections of doctors and dentists [to state medicine] . . .; all you have to do is to see the way it is working out in Great Britain.

"I lived over there and saw it function. Thank the Lord, I didn't have to depend on it, for I could go to competent Army doctors. But I had plenty of friends who were forced to depend on it, for they had deductions for it taken out of their slim pay and couldn't afford to hire Harley Street specialists.

"If what they got under socialized medicine was medical care and competent treatment of illness and disease, then I'm a Tanganyikan rhinoceros. The panel doctor's office was an assembly line of 50 patients crowded into the time and space it should have taken him to handle 10. He gave each of them scarcely more than a look and a promise—and often they got the wrong medicine in the rat race. Some of the offices were even unclean, and some of the doctors were smelling high of drink, but what did they care? Their fees were guaranteed by the Government at so much a head.

"And the poor patient, if dissatisfied, couldn't change doctors once he had signed up, without the permission of the doctor he didn't like or without three months for a government board to make up its mind. Meanwhile, he could make a choice between paying a competent specialist a stiff fee or dying slowly. One thing for sure, the socialized doctor would never cure him."

Another article in the *United States News* dealing with the subject quoted several panel members in England as being pleased with the ability to relinquish their financial obligations to members of their family afflicted with illness. It was encouraging to note that these same people evidenced some concern in the mounting cost of socialized medicine and the reluctance of the English government to reduce taxation in any manner.

Some 2,000 physicians in England have banded together to form a Fellowship for Freedom in Medicine, under the leadership of Lord Horder. A committee of this organization studied entry into general practice and reports:

"During the drafting of the National Health Service Act, the Minister of Health repeatedly expressed anxiety and concern for the welfare of the young doctor and referred frequently to the disgrace of doctors starting practice handicapped by a crippling load of debt. Many of the difficulties he pictured either did not exist or were greatly exaggerated. But unfortunately the Government propaganda was very effective, and many young doctors believed that the National Health Service Act would open a new era of easy entry into practice. As this analysis shows, exactly the opposite has happened. The haste and the lack of knowledge on the part of those who framed the Act, the destruction of good will, and the virtual extinction of private practice, all these have resulted, despite the Minister's declared intention, in difficulties far greater for the young doctor than existed before."

A perusal of the National Health Service Act* will prove enlightening to any physician who desires to inform himself regarding the intricacies of socialized medicine, although it should be mentioned that this 497 page book makes rather dry reading. As a result, it becomes more and more apparent that the gainfully employed American who would be taxed to pay for a system of National health insurance and to support a huge federal bureaucracy to operate the system would not be happy if comparable legislation should force compulsory health insurance in this country.

*The National Health Service Act, 1946, Annotated; Together with Various Orders and Regulations Made Thereunder. By S. R. Speller. London, H. K. Lewis & Co. Ltd., 1948.

CLINICOPATHOLOGIC CONFERENCE

(Continued from page 214)

tient is seen with extreme abdominal distention in whom there is no evidence of a low lying neoplasm or stricture and who presents symptoms of hypothyroidism or myxedema, such as puffiness of the face, dry skin, paucity or absence of eyebrow and pubic hair, expressionless face, and supraclavicular pads, a tentative diagnosis of ileus on the basis of myxedema should be made. The treatment is not surgical; the treatment is the administration of thyroid extract.

Dr. E. DeGowin (Medicine): What is the cause of the thyroid atrophy?

Dr. Stamler: The cause of thyroid atrophy is unknown.

STATE UNIVERSITY OF IOWA SCHOOL OF MEDICINE

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A small registration fee will be assessed.

MORBIDITY REPORT

Disease	Mar. '49	Feb. '49	Mar. '48	Most Cases Reported From
Diphtheria	3	2	8	Cerro Gordo, Floyd
Scarlet Fever	103	171	157	Boone, Polk, Story, Washington
Typhoid Fever	1	0	4	Polk
Smallpox	0	0	0	.....
Measles	158	109	2,370	Cerro Gordo, O'Brien, Page
Whooping Cough	14	19	76	Pocahontas, Scattered
Brucellosis	18	29	38	Scattered
Chickenpox	471	503	567	Black Hawk, Dubuque, Tama
German Measles	13	39	3	Dubuque
Influenza	1	2	13	Dubuque
Meningitis	2	2	3	Scott, Jones
Mumps	718	507	529	Boone, Dubuque, Scott, Story
Pneumonia	7	16	14	Black Hawk, Calhoun
Poliomyelitis	0	2	8	.....
*Rabies in Animals.....	25	27		Polk (No other county has reported more than 4 cases to date, 1949.)
Tuberculosis	66	45	65	For the State
Gonorrhea	75	61	56	For the State
Syphilis	190	128	111	For the State

*Jan. '49 total for Rabies in Animals—11.

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HEART AND CHEST INSTITUTES

The Speakers Bureau is now completing arrangements for the two heart and chest institutes which are scheduled for this month at Sioux City and Oelwein. These are being financed by the Tuberculosis Division of the State Department of Health and the Iowa Tuberculosis and Health Association, while the Speakers Bureau is procuring the speakers, sending out the announcements, etc. The newly formed Iowa Heart Association is also co-operating in this venture.

These institutes are set up along the same lines as the cancer institutes held previously. Each one will begin in the late afternoon and feature four lectures. The Iowa Tuberculosis and Health Association is providing a complimentary dinner, and there will be no charge to the physicians attending for either this dinner or the lectures.

We have planned these institutes so that both the general practitioner and specialist will benefit. Included on the roster of speakers will be prominent men from Rochester, Chicago, Madison, etc., who are well qualified to present up-to-the-minute knowledge in new technics of treatment and diagnosis.

The sessions will begin at 4:00 p.m. and continue until 9:30 or 10:00 p.m., with each lecture approximately an hour in length. The programs are as follows:

Sioux City

Thursday, May 19

4:00 p.m.—Mayfair Hotel

Fredric L. Wilson, M.D., Sioux City

Program Chairman

Surgery of the Lung

Joseph W. Gale, M.D., Madison, Wis.

Professor of Surgery, University of Wisconsin

The Medical Aspects of Heart Surgery

Stanley Gibson, M.D., Chicago, Ill.

Professor and Chairman,

Department of Pediatrics,

Northwestern University Medical School

Idiopathic Pleural Effusions

William B. Tucker, M.D., Minneapolis, Minn.

Associate Professor of Medicine,

University of Minnesota

Surgery of the Heart

William E. Adams, M.D., Chicago, Ill.

Professor of Surgery, University of Chicago

Oelwein

Thursday, May 26

4:00 p.m.—Oelwein American Legion Hall

M. G. Beddoes, M.D., and L. F. von Lackum, M.D.,
Oelwein, Program Chairmen

Recent Advances in the Knowledge of Peripheral
Vascular Diseases

Speaker not yet scheduled

Hypertensive Heart Disease

Chester M. Kurtz, M.D., Madison, Wis.

Associate Professor of Medicine,

University of Wisconsin

The Surgical Treatment of Bronchiectasis

Thos. J. Kinsella, M.D., Minneapolis

Clinical Asst. Professor of Surgery,

University of Minnesota

Bronchogenic Carcinoma

Speaker not yet scheduled

Individual announcements will be mailed to all physicians in the Sioux City and Oelwein areas two weeks in advance of the meetings, but check now to find the institute most convenient for you to attend and plan to take advantage of these excellent discussions.

The Speakers Bureau is cooperating with the Committee on Medical Service and Public Relations in distributing literature on socialized medicine, and also in furnishing speakers for groups who desire a discussion of this subject.

If you wish our help on this matter in any way, please contact the central office, and we will be happy to assist you in arranging a program.

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Tuesday at 11:30 a.m.

WOI—Thursday at 11:15 a.m.

May 3-5	First Aid in Fractures Ludwig Gittler, M.D., Fairfield
May 10-12	Socialized Medicine Committee on Medical Service and Public Relations, Iowa State Medical Society
May 17-19	Rheumatic Fever Lester M. Dyke, M.D., Sheldon
May 24-26	Fly Control Speaker not yet scheduled
May 31-	
June 2	Diarrheal Disease Merrill E. Henslin, M.D., Cresco

NEWS NOTES

from the

Committee on Medical Service and Public Relations

Minnesota Medical-Press Conference

The recent Medical-Press Conference held April 8, 1949, in Minneapolis, Minn., was attended by approximately 500 newspaper and medical men. The meeting was sponsored by the Minnesota State Medical Society and was conducted by its Committee on Medical Service and Public Relations for the purpose of improving relations between the medical profession and the newspapers. From all reports, this conference has established a precedent in public relations and should, in the end, result in other states duplicating this type of meeting. It was felt that, by holding a meeting of this nature, mutual problems could be discussed and suggestions made for improvements. News editors and reporters were present from all sections of the state, and representatives from most Minnesota county medical societies were present. Guests were in attendance from the state medical societies of Nebraska, Wisconsin and Iowa.

The meeting convened at 2 p. m. at the Radisson Hotel as an open forum, with Dr. E. M. Hammes, president, Minnesota State Medical Society, as moderator for 12 discussants. The panel members represented the Minnesota State Board of Medical Examiners, American Medical Association, Minnesota Health Department, Minnesota State Medical Association, Minnesota State Hospital Association, Veterans Administration, Minnesota State Pharmaceutical Association and the University of Minnesota Medical School. These authorities, representing various fields of medicine, were present to answer any questions directed by the newspaper and medical men. A great deal of interest was indicated by the number of questions asked of each panel member. No topics were scheduled for discussion; the time was left clear for developing whatever subjects were of most interest and importance. Questions were asked about medical practice, medical education, the cost and distribution of medical care, medical advertising, the doctor as a news source, etc. A three hour period was allotted for this

afternoon session, and it was adjourned promptly at 5 p. m.

It is the consensus of opinion of the Iowa representatives that the meeting was successful, but for Iowa's purpose would be far more effective if held at the councilor district level rather than on the statewide basis. It appeared that the Minnesota meeting was too immense to allow for adequate discussion and understanding.

A dinner at 6 p. m. followed the close of the afternoon session. Mr. Irving Pflaum, Foreign Editor, *Chicago Times*, was one of the after-dinner speakers, and his subject was "What Next in Europe?" Mr. Pflaum is recognized nationally as a foreign correspondent and author. He discussed the mental attitudes of our statesmen as compared to the thinking of the militarists in regard to happenings in Europe. He was neither pessimistic nor optimistic, but appeared to be hopeful that foreign relations are on the improving side. He believes the militarists are far more pessimistic than the statesmen, but realizes they must be prepared for most extreme conditions.

Mr. John Bach, Director of Press Relations of the American Medical Association, then spoke on "Pickpocket Medicine." He pointed out the advancements in medicine under our present system of free enterprise and predicted almost a complete halt in medical initiative if compulsory health insurance is adopted. He explained parts of the bills that have been introduced in the Congress for compulsory health insurance and indicated why they would not be satisfactory from either the consumer or physician standpoint.

Donald L. Taylor

COMMITTEE ON MEDICAL SERVICE AND PUBLIC RELATIONS

Fred Sternagel, Chairman.....	West Des Moines
Martin I. Olsen.....	Des Moines
Ransom D. Bernard.....	Clarion
Charles T. Maxwell.....	Sioux City
Roy C. Gutch.....	Chariton
Donald C. Konzett.....	Dubuque
Ernest E. Shaw.....	Indianola
Horbert E. Stroy.....	Osceola
Charles A. Nicoll.....	Panora
James E. Reeder.....	Sioux City

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

- CHILD HEALTH SERVICES AND PEDIATRIC EDUCATION**—Report of the Committee for the Study of Child Health Services. The American Academy of Pediatrics; with the cooperation of the United States Public Health Service and the United States Children's Bureau. The Commonwealth Fund, New York, 1949. Price \$3.50.
- IN THE NAME OF HUMANITY**—By Joseph Lewis. Eugenics Publishing Company, Inc., New York, 1949. Price \$2.00.
- INTRODUCTION TO THE SZONDI TEST: THEORY AND PRACTICE**—By Susan Deri; with a Foreword by Dr. LIPOT SZONDI. Grune & Stratton, New York, 1949. Price \$5.00.
- NEOPLASMS OF BONE**—By Bradley L. Coley, M.D., Attending Surgeon, Bone Tumor Department, Memorial Hospital for Cancer and Allied Diseases; Assistant Professor of Clinical Surgery, Cornell. Paul B. Hoeber, Inc., Medical Book Department of Harper & Bros., New York, 1949. Price \$17.50.
- ON THE CONTRIBUTIONS OF HUGH OWEN THOMAS, SIR ROBERT JONES, JOHN RIDLON, M.D. TO MODERN ORTHOPEDIC SURGERY**—By H. Winnett Orr, M.D., Chief Surgeon, Nebraska Orthopedic Hospital, Lincoln, Neb.; with a Supplement on RIDLON AND HIS SHARE IN MOULDBING ORTHOPEDIC SURGERY—By ARTHUR STEINDLER, M.D., Professor of Orthopedic Surgery, State University of Iowa College of Medicine, Iowa City. Charles C. Thomas, Springfield, Ill., 1949. Price \$4.50.
- OPERATIVE SURGERY**—By Frederick C. Hill, B.A., M.S. (Surg.), M.D., Associate Professor of Surgery, Creighton University School of Medicine, Omaha, Neb.; Foreword by CHARLES W. MAYO, B.A., M.S., (Surg.), M.D., Section on

Surgery, Mayo Clinic, Rochester, Minn. Oxford University Press, New York, 1949.

- PAIN SYNDROMES: TREATMENT BY PARAVERTEBRAL NERVE BLOCK**—By Bernard Judovich, B.S., M.D., Instructor in Neurology, Graduate School of Medicine, University of Pennsylvania; Physician in Charge, Neuralgia Clinic, Graduate Hospital, Philadelphia, Pa.; and WILLIAM BATES, B.S., M.D., F.A.C.S., F.I.C.S., Professor of Surgery, Graduate School of Medicine, University of Pennsylvania; Consulting Surgeon, Babies' Hospital and Philadelphia Home for incurables; Consulting General Surgeon, Wills Hospital, Philadelphia, Pa. Foreword by JOSEPH C. YASKIN, M.D., Professor of Neurology, Graduate School of Medicine, University of Pennsylvania, Philadelphia, Pa. Third Edition. F. A. Davis Co., Philadelphia, 1949. Price \$6.00.
- PSYCHODIAGNOSIS: AN INTRODUCTION TO TESTS IN THE CLINICAL PRACTICE OF PSYCHODYNAMICS**—By Saul Rosenzweig, Ph.D., Associate Professor, Departments of Psychology and Neuropsychiatry, Washington University, St. Louis, Mo.; formerly Chief Psychologist, Western State Psychiatric Institute and Clinic, Pittsburgh, Pa.; with the Collaboration of KARE LEVINE KOGAN, Ph.D., formerly Senior Clinical Psychologist, Western State Psychiatric Institute and Clinic, Pittsburgh, Pa. Grune & Stratton, New York, 1949. Price \$5.00.
- THE USES OF PENICILLIN AND STREPTOMYCIN**—By Chester Scott Keeter, M.D., Wade Professor of Medicine, Boston University School of Medicine; Director of Evans Memorial and Physician-in-Chief of the Massachusetts Memorial Hospitals. Porter Lectures, Series 15. University of Kansas Press, Lawrence, Kan., 1949. Price \$2.00.

BOOK REVIEWS

CONTROL OF PAIN IN CHILDBIRTH

By Clifford B. Lull, M.D., F.A.C.S., F.I.C.S., Director, Division of Obstetrics and Gynecology, Philadelphia Lying-in Unit, Pennsylvania Hospital; and ROBERT A. HINGSON, M.D., F.I.C.S., F.A.C.A., F.I.C.A., Associate Professor of Obstetrics, Anesthesiologist, Department of Obstetrics, John Hopkins University and Hospital; Surgeon, U.S. Public Health Service. Introduction by NORRIS W. VAUX, M.D., Consulting Obstetrician and Gynecologist, Philadelphia Lying-in Unit, Pennsylvania Hospital; Professor Emeritus of Obstetrics, Jefferson Memorial College. Third Edition, revised and enlarged. J. P. Lippincott Company, Philadelphia, 1948. Price \$12.00.

The opening chapters of the book are concerned with the anatomy and nerve supply of the female pelvis, written by professors of anatomy and neurology. Some obstetricians and anesthesiologists may take exception to the sensory and motor nerve supply to the uterus offered by these authors.

The book presents an excellent review of all types of anesthesia used in relief of pain of childbirth and, for that matter, relief of any pain.

Since the authors have reintroduced caudal anesthesia, considerable instruction is given to this. Also, a chapter is devoted to the most recent anesthesia in use, low subarachnoid block, or saddle anesthesia.

Considerable space is given over to resuscitation and care of newborn infants.

V. D. T.

HUMAN BIOCHEMISTRY

By Israel S. Kleiner, Ph.D., Professor of Biochemistry, and Director of the Department of Physiology and Biochemistry, New York Medical College, Flower and Fifth Avenue Hospitals, formerly Associate, Rockefeller Institute for Medical Research, New York. Second Edition. The C. V. Mosby Company, St. Louis, 1948. Price \$7.00.

This book has 649 pages, 25 chapters and an appendix of 22 pages. It deals with human biochemistry as applied in clinical medicine. It is well written and has a complete and useful index. The appendix contains tables showing the composition, including the vitamins and caloric content, of all common foods in household measurements. The chemistry of the usual physiologic activities is well covered, and sufficient references are given for those having further interest in the subject being considered. The chapters on vitamins and hormones are very interesting. The final chapter, "Recent Clinical Applications," is concerned with functional tests, antibiotics, sulfa drugs, etc. The value and usefulness of this book is attested by the fact that three reprinted editions were necessary in 1946.

F. W. M.

MICROBIOLOGY AND PATHOLOGY

By Charles F. Carter, B.S., M.D., Instructor in Pathology and Applied Microbiology, Parkland Hospital School of Nursing, Dallas, Texas; Director, Carter's Clinical Laboratory, Dallas, Texas. Fourth Edition. The C. V. Mosby Company, St. Louis. 1948. Price \$5.00.

This well known textbook for nurses covers the subjects of bacteriology, immunology and pathology. The illustrations are clear and of distinct value in teaching, in contrast to those of the previous edition, which was handicapped by the poor quality of paper during the war. However, in some parts of the book lines of print are heavy in contrast to other lines. This gives an italicized appearance that is not warranted. The subjects are discussed in a concise and readable manner, which is necessary if student nurses are to grasp the large volume of material they are expected to master.

T. M.

PHYSICIAN'S HANDBOOK

By John Warkentin, Ph.D., M.D., and Jack D. Lange, M.S., M.D., Fifth Edition. University Medical Publishers, Palo Alto, Calif. Price \$2.00.

This handbook, in its fifth edition since 1941, presents to the physician and medical student a terse and comprehensive summary of diagnostic procedures and factual data. As a pocket reference, it includes a relatively complete laboratory manual, with emphasis on clinical factors such as abnormal laboratory findings, various diagnostic procedures, and quick reference outlines and tables. Several new procedures and outlines have been added to this edition.

To be in a fifth edition in a relatively short period of time may be an indication of the popularity of this handbook. For quick reference it is invaluable. It is remarkable that so much factual information can be included in such a pocket manual.

M. E. A.

PSYCHIATRY IN GENERAL PRACTICE

By Melvin W. Thorner, M.D., D.Sc., Assistant Professor of Neurology, Graduate School of Medicine, University of Pennsylvania. W. B. Saunders Company, Philadelphia, 1948. Price \$8.00.

"People are slowly beginning to recognize this changing orientation of psychiatry as a branch of medicine that has to do with mental hygiene and troubling personality problems as well as with the more obvious and crippling mental disorders. The time is approaching when people may come in for periodic psychiatric check-ups as well as for periodic

physical check-ups. There is no reason why the general practitioner should not be in a position to do both," and "A comprehensive type of approach to the apparently well patient may ultimately prove to be the most valuable service medicine has to offer people who wish to remain well both physically and emotionally."

These quotations from the book under review are ample proof why there should have been written this special work, which is far from being just another book on psychiatry.

Here is a refreshingly different textbook, tailor-made to reacquaint the internist and general practitioner with those aspects of psychiatric theory and practice which are of constant daily concern to him in his professional work. It does it in "easy lessons," because the book is so exceedingly well written that one reads it with a sense of suspense. The style is admirably clear and simple, avoiding the difficult "mumbo jumbo" of much of modern psychiatric literature, and still the author conveys the modern concepts of dynamic psychiatry. Its plan is eminently practical in that it does not squeeze the material into a formally classified description; instead the author has presented psychologic medicine in a manner that avoids the sensational, but is yet dramatic from a professional point of view, by familiarizing the student with the people that ask his help in a psychiatric difficulty. He speaks not of anxiety states which one cannot see, but of "anxious people." There are also the "Unhappy," the "Dementing," the "Confused," the "Dreamy," the "Suspicious," and the "Queer and Twisted People" portrayed in extremely interesting representative case histories. Finally, "The Rest of Us."

The second main section is made up of sufficiently detailed descriptions of modern therapeutic methods, discussing chemotherapy and physiotherapeutic measures, including use of restraints and hydrotherapy. Shock therapy is considered, covering insulin metrazol and electroshock.

The chapter on psychotherapy gives a number of helpful technics for talking and listening to the patients as they come within the realm of any practitioner worth his salt. There are no hints as to how to conduct a formal psychoanalysis. To further enhance the value of the book, it contains many well selected references, an index, information about commitment procedures, and the officially accepted formal classification of mental disorders.

The book is highly recommended for its unusually interesting presentation of a subject that should be close to everybody who has accepted the modern view of treating the "whole" patient—body and soul. The foreword concludes by quoting that "it does not take a great mind to make simple things complicated, but a very great mind to make complicated things simple." This book makes complicated things simple.

F. S. K.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. ROGER M. MINKEL, Fort Dodge

President-elect—MRS. CLAIR H. MITCHELL, Indianola

Secretary—MRS. IVAN K. SAYRE, St. Charles

Treasurer—MRS. WILLIAM B. CHASE, JR., Des Moines

LOOKING AHEAD

I am making a personal appeal to every Auxiliary member to mobilize without delay every doctor's wife in our state. We must join with the medical profession and the hundreds of thousands of other clear thinking Americans to tell the truth about medical care in our country. Today—*NOW*—we women have a vitally important part in convincing the public that a politically manipulated system of medical care has no place in American life. Our position in this final and challenging contest is clearly defined.

The directors of the National Education Campaign of the American Medical Association, organized for health education to all, have developed a detailed and comprehensive national plan of campaign in which state and county auxiliaries will be asked to play a vital part. You will be advised of procedures to follow through your county president—bring the membership in your locality up to full strength and **STAND BY FOR ACTION!**

Mrs. Roger M. Minkel
President-Elect

ACTIVITIES OF COUNTY AUXILIARIES

Polk County

The Polk County Medical Auxiliary met at Youngers Tea Room for luncheon March 18 at 1:00 p.m. Sixty-seven attended. Dr. George Zimmerer, director of Cancer Control for the State Department of Health, presented a program on "Cancer," assisted by Mrs. Frederic Lattner.

Mrs. W. B. Chase, Jr.

Craft and Hobby Show

The Craft and Hobby Show, an exhibit of handwork made by the handicapped of Iowa, opened March 18 at Youngers in Des Moines and closed March 26. It was sponsored again this year by the Woman's Auxiliary of the Polk County Medical Society, in cooperation with the Iowa Society for Crippled Children and Adults.

This year's display included leather articles, chip-carved book ends, baby garments, crocheted pieces, aprons and Easter novelties. The handwork was offered for sale, and advance orders were accepted.

The presidents of Polk County's women's organizations were the guests of the auxiliary at a tea and preview of the show March 18.

A committee of eight was in charge of the show, with Mesdames F. E. Thornton and B. E. Keen acting as co-chairmen. Other members were Mesdames A. H. Downing, Floyd A. Springer, Dwight C. Wirtz, D. W. Coughlan, Allan B. Phillips and L. K. Shepherd.

The committee, all members of the Woman's Auxiliary of the medical society, evaluated each item on display and made recommendations for improvement where necessary to the exhibitors. It has also provided the volunteer workers for the show.

The 1949 Craft and Hobby Show is the fourth of its kind to be held. The first was exhibited in 1943. Contributors to the shows receive training in handicraft through the purchase of Easter seals.

"Sunny Side," March, 1949

Delaware County

The Delaware County Medical Association and its Auxiliary met at the Glen Charles hotel on Wednesday evening, March 16. Following dinner, the groups held separate meetings.

Mrs. Shannon Charlton was guest speaker for the women's group, and the auxiliary had as guests Mrs. L. G. Carrigg and Mrs. R. E. Weland, both of Cedar Rapids, and Mrs. H. A. Housholder of Winthrop.

Plans were made to send a copy of the article entitled "The Taxpayer and National Health Bill S-5" to all clubs, organizations and newspapers in the county.

Mrs. B. H. Byers
Publications Chairman

Mahaska County

We are taking the liberty of quoting from a personal letter of Mrs. George H. Clark, Oskaloosa, on some of the projects of the Mahaska County Auxiliary:

"Just the past month I acted as program chairman for our Mahaska Auxiliary. You might like to know that our auxiliary was instrumental in bringing Mr. Donald Taylor, field secretary, Iowa State Medical Society, to Oskaloosa April 4. We have already started on our program to educate the public in this area on the evils of socialized medicine. Mr. Taylor had the opportunity of speaking before the Kiwanis, Lions and Rotary Clubs. On Monday evening he spoke to the doctors, dentists and osteopaths. We are following up with a big gathering which will include

small business representatives, union and farm grange groups.

"And with the literature, we hope to reach P.T.A. meetings and to distribute literature as tuck-in on mailing lists and packages. Oh, there are so many ways to pass the information on if we will become aroused enough to cooperate.

"March 27 our committee planned a tea to which the girls of the O.H.S. graduating class were invited. A nurse from Iowa City spoke, and our president explained the different loans. We did make the effort in recruiting nurses.

"We need leadership and better trained speakers—some with sparkle and a power to convince. Half-way talent doesn't seem to move the ordinary individual."

SENATOR LISTER HILL'S PROPOSED
VOLUNTARY HEALTH INSURANCE BILL
S. 1456

Senator Hill's bill stipulates:

1. State planning and administration of a program functioning through a state council of 11 members.
2. Federal administration through a council consisting of the U. S. Surgeon General, two doctors, two hospital administrators, two individuals representing consumer interests who are experienced in the operation of existing health insurance plans.
3. Beneficiaries would comprise those who are financially able and wish to contribute to a prepayment fund and those who can make little or no contribution. Hospital and doctor bills for noncontributors would be provided through government membership in one of the nonprofit plans.
4. A ratio of per capita income (state and national), state contributions, and the number of needy would determine federal grants to states.
5. Increased expansion of existing voluntary health and hospital insurance programs; expansion and improvement of local public health units.
6. Federal aid for training doctors and nurses.

MICHIGAN REPUBLICAN CONVENTION
PASSES RESOLUTION

The State Republican Convention in Grand Rapids, Mich., last week passed a resolution which reads as follows:

Resolution on Socialized Medicine

Socialized medicine is not the answer to the country's health problems. Our medical and health problems will be better solved by enabling more qualified individuals to train for the medical profession, by lifting educational bars to racial minorities so that they may participate in medical and dental training and practice, by relaxation of federal taxation so that the states may handle their responsibility in this connection, and by the spread of private health service plans.

Bulletin 9, Washington Office of the A.M.A.

NURSE RECRUITMENT

To: County Chairmen, Nursing Interests
From: Mrs. Howard W. Smith,
Chairman, Nursing Interests

Many of you did a find job of student nurse recruitment last year. I want to take this opportunity to express my thanks and appreciation for your fine cooperation. I am sure that we all feel that our efforts have been worth our time.

I am sure that you all agree that the student nurse recruitment program must be continued. There is still a great need for more student nurses. Let us all intensify our efforts now before the close of school to recruit students for the fall classes.

The following suggestions have already proved fruitful in recruiting student nurses. Many of you may have other good methods to use and to pass on to us.

1. We can visit our schools and ask the superintendent to include nursing in his vocational guidance program. Use the movie and literature that are available by writing to me for them. A copy of "Who Me?" is enclosed.
2. The opportunities of nursing as a profession can be presented through organizations such as Women's Clubs, Parent-Teachers Associations, High School Assemblies, American Legion Auxiliary, 4-H Clubs, Church and Sunday School groups.
3. The hospital nearest you will be glad to furnish a nurse speaker (in uniform) for your program. Use the literature and movie, too, at these programs. Student nurses (in uniform) do a fine job of nurse recruitment, especially with the high school groups. Practically every community has a home town girl in training in some hospital. The home town girl in her student uniform giving a talk about her experiences does a wonderful job for nurse recruitment. Three high school seniors from Stuart are entering nurses training next fall, because they learned about nursing from a student nurse at a meeting given at the Woman's Club in Stuart last spring. At the meeting, the high school girls were invited as guests of the Woman's Club. The program was arranged by a doctor's wife. This kind of program in other Iowa towns produced similar results.
4. Work with the public health and hospital nurses in your county. Together you can do a good job.
5. Build up good relationships between doctor's wives and nurses. Include the nurses in social and community activities. Nurses, too, are recruiting young women for future nurses.
6. The Iowa Division of the American Cancer Society has allocated \$15,000 to finance nurse scholarships which are to be given on the basis of need, character and ability. Write to the Iowa Division, American Cancer Society, headquarters, 117½ North Federal Avenue, Mason City, for details.

The Woman's Auxiliary also has a student nurse loan fund with Mrs. W. R. Hornaday, 612 Forty-fourth Street, Des Moines, as chairman. This fund is being built up by gifts from auxiliaries and individuals. It is another way we can all help.

The Iowa Federation of Women's Clubs also has a student loan fund. Consult your local Woman's Club for details.

Some of the hospitals have a number of scholarships. Girls who are interested in nurses training should feel free to discuss any financial problem with the director of the nursing school.

If any of you have any questions do not hesitate to write to me.

Mrs. H. W. Smith, Woodward

THE BOOK SHELF

American Hospital Association Booklet

Those auxiliaries which carry on an active program in assisting hospitals will be interested in a 120 page booklet (\$1.50 per copy) available through the publications department of the American Hospital Association, 18 East Division St., Chicago 10, Illinois.

Among the subjects discussed are: "How the Auxiliary Fits Into the Hospital Program"; "The Service Concept of Auxiliaries"; "Women's Auxiliaries and the Veterans Administration"; "How the Auxiliary Fits into the Nursing Program"; and "An Analysis of a National Study of Women's Hospital Auxiliaries." There are also explanations of 10 successful fund-raising projects.

Death Be Not Proud

Death Be Not Proud by John Gunther is the most profoundly moving book it has been our privilege to read since Perry Burgess' *Who Walk Alone*. John Gunther is justly famous for his definitive books on contemporary living: *Inside Europe*, *Inside Asia*, and more recently, *Inside U. S. A.* What the public has not known, however, is that while he was writing *Inside U. S. A.*, which became a book-club selection and sold by the thousands, his only son was dying of a brain tumor.

Death Be Not Proud is a beautiful book which will carry every reader "inside life." It is a book which should be read not only by parents, but by all thinking adults who have lost touch with the shining glory of just being alive. In our opinion, John Gunther has done his finest writing in this unforgettable tribute to the indomitable spirit of his teen-age boy, just as William Allen White created a classic in his memorial to his daughter "Mary White."

Johnny Gunther, Jr., was born in Paris, Nov. 4, 1929, and died on June 30, 1947, "when he was 17, after an illness that lasted 14 months. He would have entered Harvard that autumn had he lived." He lived in Vienna and in London as a small boy and received his public schooling in the United States at Wilton, Conn., Lincoln School, New York City, and Deerfield Academy in Deerfield, Mass. Although his parents were divorced, Johnny had a deep and abiding relationship with his Jewish mother and his literary father.

Tragedy struck suddenly and surely in his junior year at Deerfield Academy, and operation was the recommended procedure. He was on the table six hours for his first operation, and half a tumor, the size of an orange, was removed. During all of the agonizing months to come, Johnny and his parents fought for his life, fortified by a battery of the most renowned specialists in the country and by all of the methods science could provide, some being used for the first time. There were periods of improvement so marked that even the doctors considered them miraculous. Then there were periods when the tumor mushroomed so rapidly through the opening left purposely in his head that it resembled two huge tomatoes in size.

While the parents alternated between hope and despair, they maintained a calm, optimistic front for Johnny. They never knew until they read his diaries after he was gone that he had done the same thing for them. He was a bright boy, a student, and knew the outcome of his own malady. He was so brilliant that private tutoring enabled him to graduate with his own class from Deerfield Academy. After six weeks with the New York Tutoring School, Johnny received grades of 90 in English, 95 in history, and 95 in trigonometry. "This in a boy with half a brain!" His specific interest was chemistry, which he had hoped to make a profession. It was perhaps the greatest joy in his life to march down the aisle and receive his diploma from Deerfield Academy, even though his left hand was practically useless, his left foot dragged pitifully, and his head was swathed in bandages which were constant attire for so many months.

Well, he died, as you may know. He died as so many others have died who were unfortunate enough to have developed incurable maladies. With all of his potentialities, his youth, and invincible spirit, he died—while so many others deliberately destroy the wonderful possibilities life can offer.

His parents are not bitter or cynical. They loved him very much as his mother states in her postscript, and they wish that they had loved him more, perhaps preserved the marriage which created the home that he loved so well. She comments:

"Today, when I see parents impatient or tired or bored with their children, I wish I could say to them, 'But they are alive, think of the wonder of that. They may be a care and a burden, but think, they are alive! You can touch them—what a miracle! You don't have to hold back sudden tears when you see just a headline, because you know your boy will never see the Yale-Harvard game, never see the house in Paris he was born in, never bring home his girl, and you will not hand down your jewels to his bride and will have no grandchildren to play with and to spoil. Your sons and daughters are alive. Think of that—not dead, but alive! Exult and sing . . . I hope we can love Johnny more and more 'til we too die, and leave behind us, as he did, the love of love, the love of life.'"

Mrs. K. M. Chapler

(Continued on page 230)

SOCIETY PROCEEDINGS

MEETINGS

Audubon

Newly elected officers of the Audubon County Medical Society are Dr. LeRoy E. Jensen, president; Dr. Peter E. James, vice president; and Dr. Harold K. Merselis, secretary.

Black Hawk

The Black Hawk County Medical Society met April 12 at the Elks Club in Waterloo. Dr. William Sucha, of Omaha, Professor of Orthopedics, Creighton University, spoke on the subject of "Low Back Pain with Special Reference to Herniated Disc."

Clinton

The Clinton County Medical Society held a dinner meeting March 23 at the Lafayette Hotel, Clinton. A \$1,000 donation to the Dewitt Hospital fund was voted, and it was also decided that some of the doctors will take Wednesday afternoons off, while others will take Thursday afternoons in order that some doctors will be available at all times. Dr. Ralph F. Luse presented a paper on "The Meaning of Socialized Medicine."

Delaware

The Delaware County Medical Society and its Auxiliary met at the Glen-Charles Hotel in Manchester on March 16. Following dinner, the groups held separate meetings, with Drs. Lawrence G. Carrigg and Regis E. Weland, both of Cedar Rapids, as guest speakers for the doctors' meeting.

Greene

Members of the Greene County Medical Society were dinner guests of the Dental Society at a joint meeting April 15 at the Dutch Mill in Jefferson. An oral surgeon gave a film lecture on "Malignancy of the Mouth."

Henry

The Henry County Medical Society and its Auxiliary met for a dinner and business meeting at the Mt. Pleasant Golf and Country Club on April 5.

Johnson

Continuing the custom of the past several years, the Johnson County Medical and Dental Societies held a joint dinner meeting April 16 at the Jefferson Hotel, Iowa City. Speaking on "The Management of Compound Facial Injuries" was Dr. James Bar-

rett Brown, Professor of Clinical Surgery, School of Medicine, and Professor of Maxillo-Facial Surgery, School of Dentistry, Washington University, St. Louis, Mo.

Lee

At the quarterly meeting of the Lee County Medical Society, held April 13 at the Iowa Hotel in Keokuk, Dr. Mark Wheelock and Dr. Theodore VanDellen, both associate professors at Northwestern University College of Medicine and on the staff of Passavant Hospital, Chicago, were guest speakers. Dr. Wheelock discussed "Pathological Principles of Thromboembolic Diseases" and Dr. VanDellen's topic was "Clinical and Therapeutic Phases of Thromboembolic Diseases."

Linn

Guest speaker for the Linn County Medical Society meeting, to be held May 11, will be Mr. Harold Rodgers, Professor of Surgery, Queens University, Belfast, Ireland. His topic will be "Atrophy of the Gastric Mucosa."

Mitchell

Dr. William E. Owen is the newly elected president of the Mitchell County Medical Society and Dr. C. F. Watson, secretary-treasurer.

Sac

The Sac County Medical Society held a dinner meeting at the Park Hotel on March 24 in Sac City. Dr. Jay R. Dewey, of Schaller, presented a talk on "The Work of the American Cancer Society," which was followed by a brief round-table discussion.

Scott

Officers of the Scott County Medical Society for 1949 are Dr. Elmer Senty, president; Dr. Carl Matthey, president-elect; Dr. L. W. Kimberly, vice president; Dr. M. J. Brown, secretary; and Dr. F. Dale Wilson, treasurer. Delegates are Drs. W. C. Goenne and George Braunlich, and alternates are Drs. Harry Lamb and L. V. Schroeder. Censors are Drs. J. H. Sunderbruch, H. J. Evans and W. C. Goenne. Dr. W. S. Binford is historian.

Upper Des Moines Valley Society

Dr. Francis X. Cretzmeyer, of Emmetsburg, was elected president of the Upper Des Moines Valley Medical Society at its semi-annual meeting with the Auxiliary held at the Tangney Hotel in Spencer

March 10. Dr. Ruth F. Wolcott, of Spirit Lake, was elected secretary-treasurer.

Washington

At the Washington County Medical Society dinner meeting March 24, Drs. John H. Randall and Joseph J. Straub, both of Iowa City, gave an obstetrical demonstration, using a manikin to illustrate the lecture.

Woodbury

At the Woodbury County Medical Society dinner meeting March 30 at the Martin Hotel, Sioux City, reports of committee studies and action were presented. Dr. R. H. McBride discussed the problem of mental hygiene in Sioux City and what is being done to cope with it. Dr. A. C. Starry reported on operation of the blood bank, and Dr. E. J. Tierney outlined and explained pending state legislation affecting the profession.

The next dinner meeting of the society will be held May 19 at the Mayfair Hotel. A symposium on chest and heart diseases will be presented by authorities in those fields.

PERSONALS

Dr. Robert L. Barton, of Dubuque, discussed some phases of cancer at the county-wide meeting of the Clayton county chapter of the American Cancer Society, held in Elkader March 18 at St. Joseph's Hall.

Dr. J. Kent Boughn has become associated in Mapleton with Dr. Harold L. Ganzhorn. Dr. Boughn was graduated from the University of Nebraska College of Medicine in 1946. His internship was served in Richmond, Va., and for the last 18 months he has been practicing in Walthill, Neb.

Dr. Thaddeus T. Bozek, coming to West Branch from duty as flight surgeon on a navy aircraft carrier, has assumed the practice of Dr. Matt Ware, who passed away in February. A native of Easthampton, Mass., Dr. Bozek was graduated from Creighton University School of Medicine, Omaha, and interned at the Seattle Naval Hospital, with a short tour of duty at the Bremerton Naval Base. Dr. Bozek also took specialized aviation medical work at Pensacola, Fla.

Dr. William J. Brown will be associated with Dr. David F. Weaver in Davenport, beginning May 1. A graduate of the State University of Iowa College of Medicine, Dr. Brown took pediatric training for four years in Buffalo and Chicago.

Dr. Willis E. Brown, Associate Professor of Obstetrics and Gynecology, College of Medicine, State

University of Iowa, since 1943, has resigned his position effective May 1. Dr. Brown will become Professor and Head of the Department of Obstetrics and Gynecology at the University of Arkansas.

Dr. Thomas J. Carroll has become associated in Sibley with Dr. C. C. F. Bosch. Born in Lowell, Mass., Dr. Carroll was graduated from the State University of Iowa College of Medicine and has recently completed his internship at St. Joseph Mercy Hospital, Sioux City.

Dr. Vincent H. Carstensen spoke on "What's New in Children's Health and Medicine" at a meeting March 17 of the Child Welfare Department of the Waverly Woman's Club.

Dr. Raymond E. Cooper, of Keokuk, spoke to the students of St. Peter High School there on March 24, discussing the medical profession as a career.

Dr. John P. Darling, of Mason City, addressed the American Legion Auxiliary April 4 on the topic of socialized medicine.

Dr. Cluley C. Hall, of Maynard, discussed the proposed federal compulsory health insurance program at a meeting March 14 of more than 125 persons, representing 15 or 20 organizations in Cresco and Howard county. The meeting was sponsored by the Howard County Medical and Dental Associations.

Dr. Wayland K. Hicks, of Sioux City, spoke on socialized medicine at the Council Bluffs Chamber of Commerce dinner April 28. Other speakers were Drs. Gerald V. Caughlan and Isaac Sternhill, both of Council Bluffs.

Dr. Frederick W. Kiesau spoke on the "History of Medicine" at the March 14 meeting of the Postville Kiwanis Club.

Dr. Clare E. Knouf, of Lake City, discussed socialized medicine before his fellow Kiwanians at the club's meeting March 21.

Dr. Francis Kodl, of Davenport, spoke April 13 to the Parent-Teacher Association of Lincoln School, Bettendorf, on the subject, "Mental Health for the Young Child."

Dr. Robert Lynn has become associated with Dr. Arthur C. Wubben in Rock Rapids. A native of Lincoln, Neb., Dr. Lynn was graduated from the University of Nebraska College of Medicine in 1947 and interned in Omaha. For the past year, he has been in St. Joseph's Hospital in Sioux City.

Dr. Harold Margulies, of Des Moines, discussed "Socialized Medicine" at a meeting April 13 at the Wakhonsa Hotel in Fort Dodge, which was sponsored by the Fort Dodge District Dental Assistants.

Dr. Harold W. Morgan, of Mason City, spoke March 24 in Clinton over radio station KROS on "Cancer" and later at the "Spring Promenade," sponsored by the Clinton Branch of the National Hairdressers Association, the proceeds of which were for the American Cancer Society.

Dr. Frank G. Ober discussed "Socialized Medicine" at a luncheon meeting of the American Business Club March 29 at the Arion Club in Burlington.

Dr. Frank R. Peterson talked on "Modern Methods of Cancer Control" before the Benton county chapter of the American Cancer Society March 16 at Vinton. Dr. Peterson, who returned recently from a visit in Puerto Rico, delivered two lectures while in that country. He spoke before medical and post-graduate students at San Juan, and on March 9 addressed members of the Puerto Rican Medical Society at San Patricio Hospital in San Turce.

Dr. Everett D. Plass gave the second in a series of marriage lectures sponsored by the Iowa City YWCA on March 16.

Dr. Gerald R. Rausch, Neuropsychiatrist and Major in the Medical Reserve Corps, gave a lecture on "Personal Adjustment" to the airmen at the 2470th Airforce Reserve Training Command, Sioux City, on April 8.

Dr. Robert D. Rowley, of Burlington, spoke April 1 on "Socialized Medicine" at an open meeting sponsored by the Burlington Nurses Association at the Burlington Hospital Nurses' Home.

Dr. George C. Scanlan, DeWitt physician for 23 years, is suspending his practice indefinitely because of his health and will establish a permanent residence in Omaha, Neb.

Dr. Leo B. Sedlacek, of Cedar Rapids, discussed child problems March 14 before members of the Young Married Group at the Tipton City Hall.

Dr. Siegmund F. Singer, of Ottumwa, was the speaker at the annual meeting of the Wayne county chapter of the American Cancer Society, which was held March 28 in Seymour.

Dr. Arthur Steindler presented a paper on "Malignant Tumors of the Bone" at a Nurses' Cancer Clinic in Des Moines March 23.

Dr. Mayo H. Soley delivered a paper on "The Heart in Hyperthyroidism" at the joint meeting of the Iowa Tuberculosis and Heart Associations in Des Moines March 24 to 25.

Dr. William M. Vest, of Iowa City, will begin practice May 1 in Carpinteria, Calif. Taking over Dr. Vest's practice in Iowa City is Dr. K. J. Judiesch.

Dr. George L. Wadsworth, Superintendent of the Woodward State Hospital since February 1948, has resigned effective June 1 to accept a position as First Assistant Physician at the Norwich State Hospital, Norwich, Conn.

Dr. Carl A. Walvoord, who has been practicing in Dunlap since March 1947, has accepted a resident surgeonsip at the Lutheran Hospital in Omaha, effective April 1.

Dr. Matt B. Weir, physician in Griswold for 56 years, recently sold his practice to Dr. Ralph H. Moe, Resident Physician at Mercy Hospital, Council Bluffs, who will take over June 1.

Dr. Wilson C. Wolfe, of Ottumwa, spoke on "Do We Want Socialized Medicine," before the Rotary Club in Ottumwa March 21 and the Carroll County Health Council in Carroll on March 28.

Dr. Asa O. Wyland, retired Underwood physician, was honored by his community at an open house April 2 in observance of his sixtieth anniversary in that city.

Davenport physicians presented a panel discussion on "Advances in Medical Science" to the Rotary Club March 28. Headed by Dr. Gordon F. Harkness, the panel was composed of the following: Drs. John C. Peart, Preston E. Gibson, George Braunlich, Merrill M. Benfer, Frederick H. Lamb and Louis H. Kornder.

Drs. Francis Kodl, Joseph L. Kehoe, M. W. Van Allen and Olan R. Hyndman have been added to the Mental Health Center in Davenport, as consultants.

Discussants on Socialized Medicine" at a meeting of the Kiwanis Club in Sioux City March 24 were Drs. Herbert C. Leiter, Edward H. Sibley and Edmund J. Teirney.

DEATH NOTICES

Galman, James John, 76, of Sheldon, died April 1 in a Sioux City hospital. Born in Kalamazoo, Mich., Dr. Galman was graduated from the Detroit College of Medicine in 1897. He practiced in Hospers for 48 years, moving to Sheldon when he retired two years ago. He was a life member of the O'Brien County and Iowa State Medical Societies.

Hamilton, Benjamin C., Sr., 89, died at his home in Jefferson March 20, following an illness of six weeks. Dr. Hamilton, born in Champaign, Ill., was graduated from the College of Physicians and Surgeons in Keokuk in 1882. After practicing 10 years in Churdan, Marion Junction, S. D., and Scranton, he moved to Jefferson in 1893, where he had been in practice for 56 years. He was a life member of the Greene County and Iowa State Medical Societies.

Miner, James B., Sr., 80, of Charles City, died March 22 at Cedar Valley Hospital from chronic heart failure with complications, following an illness of five months. Dr. Miner was born at Hebron, Wis., and was graduated from the Hahnemann Medical College, Chicago, in 1894. He practiced at Palmyra, Wis., and Osage, before coming to Charles City in 1900, where he had practiced until his retirement in 1947 because of failing health. He was a life member of the Floyd County and Iowa State Medical Societies.

Nesler, Alfred Benjamin, 53, died suddenly at his home in Dubuque of a heart ailment. Dr. Nesler was graduated from University of Michigan Medical School in 1920. A native of Dubuque, he began his practice there in 1924, after serving in hospitals in Youngstown, Pa., and New York. He established the Nesler Clinic in Dubuque in 1932. He was a member of the Dubuque County and Iowa State Medical Societies.

Nysewander, Christian, 93, died April 8 at his home in Des Moines, where he had practiced until his retirement three years ago. Born in Ohio, Dr. Nysewander was graduated from Starling Medical College, Columbus, in 1879. He was a life member of the Polk County and Iowa State Medical Societies.

Vinson, Harry W., 73, died April 8 in Ottumwa Hospital, following the second heart attack within a few months. Dr. Vinson was graduated from Rush Medical College in 1902 and practiced in Millersburg for five years, moving to Ottumwa in 1908, where he practiced until his death. He was a member of the Wapello County and Iowa State Medical Societies.

WOMAN'S AUXILIARY NEWS

(Continued from page 226)

FORM FOR MONTHLY REPORTS OF COUNTY PUBLICATIONS CHAIRMAN

The "Handbook for State Auxiliaries," published by the Woman's Auxiliary to the A.M.A., specifies the requisites for monthly reports to the state publications chairman. In response to various requests on this topic we are printing the suggested form.

1. Name of county auxiliary.
2. Place of meeting.
3. Date of meeting.
4. Number present (members), (guests).
5. Name of speaker.
6. Subject of address.
7. Questions discussed.
8. Action taken thereon.
9. Name of special projects.
10. Report how material sent by chairmen of committees of state auxiliary is used.

LEGISLATIVE COMMITTEE SUGGESTIONS

If you have not already done so, please read "Uncle Sam, M.D.," and "Check and Double-Check," and familiarize yourselves with the 12 point program of the A.M.A. for the advancement of Medicine and Public Health. We, as wives of physicians, should know what it is.

Also develop your interest in school legislation. Write to your congressmen—individually or one letter signed by many—on matters which concern us. There are many ways in which we can be of influence in a quiet way, and it is our job.

Legislative Committee

TWENTY-SIXTH ANNUAL CONVENTION

LAST CALL for reservations for the Twenty-sixth Annual Convention of the Woman's Auxiliary to the American Medical Association, which will be held at Haddon Hall, Atlantic City, N. J., June 6 to 10.

Atlantic City extends a hearty welcome to you!

CORRECTION

In the April JOURNAL on page 145 the first sentence under the subheading "Extensive Anterior Myocardial Infarction," which reads "The characteristic changes are present in all of the precordial leads except in leads I and aVL and possibly V₁," should read, "The characteristic changes are present in all of the precordial leads, except possibly V₁, and in leads I and aVL."

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Iowa State Medical Society

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No. 6

PRESIDENT'S ADDRESS*

James E. Reeder, M.D., Sioux City

To slightly paraphrase Thomas Paine, "These are days which try the souls of members of the medical profession." The medical political scene is changing so rapidly, almost by the hour, it is indeed very difficult for any of us to keep well informed on the national level. It seems to me, there are too many hearings where the leaders of the medical profession are not consulted to tender their advice and views. One so frequently observes this in news releases over the air and in the press.

These statements are usually pragmatic expressions of social workers, or derelicts of the medical profession, who do not know the problems of the private practitioner. These individuals gather a lot of data showing the increased cost of medical care. They are indifferent to the true picture and immediately condemn the medical profession as the source for the increase in the cost of medical care. We all know this is far from the truth. Medical fees have not been increased in anywhere near the proportion that other basic commodities have. In my opinion, and I know I express the sentiment of a majority of my colleagues, we have negated the attempt to socialize medicine entirely too long; it is only within the past few years that we have developed a positive plan of opposition through our Blue Shield insurance plans.

We are now attempting, and it is rather a desperate, belated attempt, to educate both the profession and the public on how unsatisfactory the complete socialization of medicine would be. The approach of the proponents has been anything but Socratic in nature. They have been at it for the past sixteen years, and so many misstatements have been made in that period that it is going to be very difficult, if not impossible, for us to

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PRESIDENT-ELECT'S ADDRESS*

Nathaniel G. Alcock, M.D., Iowa City

We are told daily that the demand for socialized medicine stems from the contention that there is a shortage of medical care and that means a shortage of doctors. Is there actually a shortage of doctors? This is an open question and certainly has not been proven in the state of Iowa. During the war, when so many men were in Service, the number of men left in practice was cut down until there was an actual shortage, but at the same time was there a proportional, or even actual, shortage of medical care? During those tragic years there was nothing more thrilling than the way the medical profession, both in and out of the Service, responded to the emergency and carried on. The medical profession did the same thing then that it has always done throughout its long and useful past. It performed its function and did it willingly and abundantly. Again, I question very much if there is a shortage of doctors. It has not been proven.

Will a surplus of doctors solve the problem and relieve us of the danger of socialized medicine? In the Los Angeles area there is one doctor to every 325 people, and yet in this very area we find the greatest demand for socialized medicine. The same thing is true in New York and in other thickly populated areas.

On the other hand, I think we will agree that there is a shortage of general practitioners, and I think we will agree, too, that the backbone of the profession is the general practitioner and that he has in his hands, more than anyone else, the means of stemming this tide and changing the direction of the trend. The simple explanation of the shortage of general practitioners is the fact that, during the past many years, larger and larger proportions of our graduates have gone into specialties. Therefore, the number of spe-

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*Presented before the House of Delegates, Iowa State Medical Society, Ninety-Eighth Annual Session, Des Moines, April 18-21, 1949.

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PRESIDENT'S ADDRESS

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catch up and inform the public of the truth of just what the cost would be—that in the end it would cost much more than under the present free enterprise system as we know it today—and that the services would deteriorate and the morbidity and mortality rate would go up.

We all know how our present economic system works. It is on the profit system; you buy a tire for your car, and you know the manufacturer makes a profit. You are willing to pay the asked price, though, because you know you will make a profit through the service of that tire. Otherwise you would not have purchased it. I present this simile that free medicine will not be esteemed very highly because it is free and has not been paid for. I am sure you will agree with me that this is a very normal human reaction.

American medicine has come a long way without political central control and central planning and without burdening the taxpayers. Every socialist government today is living on the American dole, the confiscated property of industry, the savings of their own people, or the plunder of other nations they have invaded. We have a well organized minority group that would be very happy to regiment the medical profession, as this would be the key to the archstone that would enable this group eventually to take over all industry, so that we would have a complete regimented state or a socialist economy.

In conclusion, there are several suggestions I wish to make to The House of Delegates for your consideration:

1. That the Constitution and By-laws be amended to permit our three delegates to the A.M.A. the privilege of voting in The House of Delegates and of serving as members of the Executive Council of The House of Delegates. The present Executive Council consists of 18 members, and 3 additional delegates will give us 21. Occasionally we do not have a quorum. When the business is of such a nature that it should have the endorsement of the Executive Council, it makes it most embarrassed not to be able to take care of it because of no quorum. Our delegates would be better informed on the state level and be better able to express the desires of our state society at the national meeting if they were members of the Executive Council.

2. I wish to call your attention in The Handbook to the report of the Treasurer and the Board of Trustees, showing the marked increase in the cost of operating our society the past year and the deficit incurred. I must concur with the

Board of Trustees in recommending an increase in dues.

3. The JOURNAL—In the past two years I have talked to a number of men throughout the state and have come to the conclusion that you authorize your incoming president to appoint a committee to study the following problems:

- (a) To determine the kind and type of articles preferred—do you want more articles for the general practitioner or more in special lines? What is wrong with the present articles, etc.?

- (b) Do you read the Auxiliary News? Do you think this should be published in the JOURNAL, or published separately and sent out to members of the Auxiliary?

4. To instruct the secretary to prepare a separate bulletin when indicated, not more than one or two pages, on material that in his opinion is important enough that the membership as a whole should be informed. I believe this would be more effective than if published in the JOURNAL. Often one does not have time to read the JOURNAL, or one misses an important article that is of interest, particularly in the field of medical economics and public relations.

5. To the embarrassment of your officers, this past year we had a request for financial aid by one of our members. But we have no means of handling such problems. May I suggest The House of Delegates authorize that a committee be appointed by the President to study this problem and report to the next annual meeting of The House of Delegates, or to an interim session if indicated.

PRESIDENT-ELECT'S ADDRESS

(Continued from page 231)

cialists is increasing, and the number of general practitioners is decreasing.

Is this due to the type of boy who is now going into medicine? It has been very recently pointed out in the press that the young man going into medicine today is not motivated by the same ideals of service as the fellow was 30 or 40 years ago. It is said that his objective in his medical career is to make a lot of money. For over 40 years I have been very closely associated with medical students, first as a student myself and then as a teacher, and I think that I am in a position to judge them fairly accurately. To me the young fellow today enters and leaves the medical school with the same high ideals of service as he did 40 years ago when I started. He is the same kind of an animal—queer, I will admit—but the same upstanding fellow who radiates kindness, generosity, and a very tolerant,

human understanding. Those who hold that he is the other type have seen him only in the city clubs and have not kept company with him during his vigils in the hospital and in the home. They have not seen underneath his skin.

What has brought this about is immaterial. What we are interested in is the cure, and the cure will explain the cause.

Three segments of society will be involved in the solution. First, there are the medical educators; second, there is the medical profession; and, third, there is the community itself. All three have had their part in bringing this about, and all three must do their part in effecting the cure.

I will speak only of the part that is to be played by the medical educators. What can they do to set up a curriculum of undergraduate and postgraduate training that will not only prepare the student for general practice, but that will turn him in that direction? Very recently a small number of our schools have set up residencies to fill this gap in their training programs. I have gone over four or five of them, and they all follow about the same pattern. There is first a year of rotation internship, followed by two more years of modified rotation internship, and capped off by a year spent as a combination intern and resident in a small hospital in a small community. To me, they all fail in one vital point. They do not bring the young man into intimate contact with the general practitioner, where he is actually doing his real work. True, they come in contact with him in the small hospital, but they see him only when he is doing his hospital work. They do not see him when he is doing his work in his office and in the home, where he actually does the real work of his calling. You must admit that the student and the general practitioner must come together in the office and in the home. This means that you must either bring the general practitioner into the faculty of the college of medicine or you must take the candidate out to him. While it might be possible to bring the general practitioner and his office into the medical school, yet you could not bring his work in the home into that circle.

Nearly a year ago at the meeting of the Public Relations Committee of this society, this topic was up for discussion, and the idea was put forth that it must be the general practitioner himself who must formulate the pattern of training. Obviously, the educator who is invariably a specialist and who has had little or no experience in general practice is in no position to determine just what this program should be. It was brought

out that it might be a very valuable thing for a group of general practitioners to go over their undergraduate work, their postgraduate work, and their experience as general practitioners, and then in the light of their experience determine how they would change the undergraduate course and the postgraduate training in order to better fit them for the work that they have been doing. That seemed to be a logical way to approach the problem.

Two of our members, Dr. Nicoll of Panora and Dr. Shaw of Indianola, became very much interested in the problem and more or less made themselves into a self-appointed committee to look into the matter. They have given it much thought and careful study, and they have come up with some ideas that I think are excellent. They have come to the conclusion that there is very little that can or should be done in the undergraduate curriculum, except that the teachers, and particularly the clinical teachers, should at all times stress the part played by the general practitioner. Too often he is belittled, particularly by the young and clinically inexperienced instructor.

Briefly, the Nicoll-Shaw plan sets up a general practice residency covering some three or four years of training following graduation. The first and last years are about the same as those in the program I have mentioned, namely, the first year is a rotation internship, preferably in a teaching hospital, and the last year is an intern-residency in a relatively small private hospital in a small community. During the intervening year, or two years, the young man will be given special training, and during six or eight months of that period he will be assigned to a carefully selected general practitioner who will act as his preceptor. Preferably he will actually live in the general practitioner's home and work under him and with him for 24 hours of the day. There are many problems and details to be worked out, but I am sure the difficulties can be surmounted.

A week ago last Sunday these two young men came to the Medical School and met with a part of the Curriculum Committee. They presented their ideas very well and their over-all plan was sympathetically received. I am sure that this is a beginning of a very important venture that is destined to great success.

With this in mind, I am going to ask the House of Delegates to give me the authority to set up and create a permanent Committee on General Practice, the chairman of which shall be a member of the Public Relations Committee.

SADDLE BLOCK ANESTHESIA IN PELVIC DELIVERIES:

Report of 150 Cases

William A. Boice, M.D., F.A.C.S., Chicago
and

William H. Stenstrom, B.S., M.D., Chicago

Parmley and Adriani,¹ and Adriani and Roman-Vega² have popularized a technic of spinal anesthesia for the pelvic delivery of obstetric patients and are credited with the term "saddle block." This term is used because the anesthesia is limited to the inner thighs and perineum, the so-called saddle area.

Many patients have a hesitancy about accepting a spinal anesthetic because of adverse reports from friends or because of articles appearing in the lay press. Few patients will refuse if they are told that a saddle block is safe because of the technic and the small amount of anesthetic which is required.

Corning³ was the first to write about spinal anesthesia in this country, his article being published in 1885. Bier⁴ in Germany injected cocaine intraspinally and put the anesthesia to clinical use. It was soon found, however, that the circulatory depression was profound, and spinal anesthesia had a limited use until 1903 when the vasoconstricting effect of epinephrine was demonstrated by Braun.⁵ Further advance followed the introduction of a less toxic drug, procaine hydrochloride, in 1905.

The search for better vasoconstrictors and for less toxic and longer lasting anesthetic agents still continues. The use of ephedrine sulphate and neosynephrin has obviated most of the danger of the drop in blood pressure. Adrenal cortex is also used to support the circulation. Now the anesthesiologist has a choice between procaine, metycaine, pontocaine, nupercaine, and others. The drug may be administered with the patient lying on the side, or sitting up. A single injection may be given, or anesthesia may be prolonged by repeated doses or continuous administration.

At the Augustana Hospital we do not have a separate anesthesia department for our obstetric service. We are dependent for our anesthesiologists upon the same staff which serves the general operating room. Because deliveries often occur during the regular operating hours, it is not always possible to have an anesthesiologist immediately available. Consequently, we find it convenient to use an anesthetic which can be controlled by our own obstetric staff.

Pitkin and McCormack⁶ used spinal anesthesia

for pelvic deliveries prior to 1928. Others had used the technic, but the general feeling was that it was not quite safe.

Early in 1947 one of us (W.A.B.) discussed this matter with Dr. Stuart Cullen and Dr. Willis Brown of the State University of Iowa College of Medicine. After we observed the procedure, it seemed to offer a satisfactory method for our use. Since then we have used the anesthetic for the late first stage of labor and for the second stage, delivery, and repair of the perineum. We believe that the anesthetic can be easily and safely repeated if desired. We have included in this study only those cases in which the senior author gave the anesthetic or was present to supervise the case.

From an anatomic point of view, it is necessary to block afferent impulses as high as T 11 and T 12 (Fig. 1), as these are the paths from the

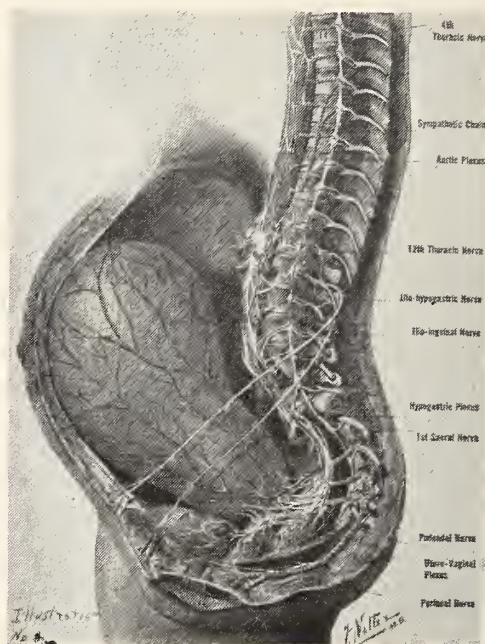


Fig. 1

fundus of the uterus. The cervix, vagina, and perineum are covered by S 2, S 3 and S 4.

Various anesthetic agents are being used with good success. These agents include procaine, pontocaine, metycaine and nupercaine. Nupercaine is considered to have the longest duration of any of the local anesthetic agents. For the sake of uniformity we have used nupercaine in all of these cases. With few exceptions, the dose has been 2.5 mg. of nupercaine mixed with $\frac{1}{2}$ cc. of 10 per cent glucose, to make a hyperbaric solution.

This report is based on our experiences and

results in 150 private cases. In analyzing our results we have compared them with those obtained in a second group of 150 cases delivered under other types of analgesia and anesthesia in an effort to decide whether or not the procedure is useful or justified.

There are a few contraindications to the use of saddle block. Shock is certainly a contraindication. An infection of the skin at the site of injection is a contraindication. A history of meningitis, a positive test for syphilis in the spinal fluid, an operation on the lumbar spine, the injection of an opaque substance into the spinal canal, all these are contraindications. Also, we never use saddle block if the patient has been at all hesitant about accepting the idea.

We have used it in cases of preeclampsia, rheumatic heart disease, twins, and breech presentations in addition to all so-called normal presentations. We have done manual rotations from occiput posterior positions and have done manual removals of the placenta with no supplementary anesthesia.

With the above contraindications considered, the cases were unselected.

We feel that every pregnant woman should receive all the pain relief possible consistent with safety for the mother and the fetus. As soon as a patient is in active labor and having regular contractions from five to six minutes apart, lasting 45 seconds or longer, she is given $1\frac{1}{2}$ to 3 grains of pentobarbital sodium orally. If the cervix shows 2 to 3 fingers dilatation, the smaller dose is given. When the patient complains that her contractions are painful, she is given 100 mg. of demerol and 20 minutes later $1/150$ grain of scopolamine. Even if she is not complaining and the dilatation is 3 fingers, she is given the initial dose of demerol and scopolamine.

We do not believe that these drugs will stop active labor. At the end of two hours, if it appears that delivery will not take place within an additional two hours, the demerol is repeated in a dose of 100 mg., and a dose of $1/200$ grain of scopolamine is given. With this routine, we have seen none of the wild, uncontrollable patients with whom we dealt so often when we were using large doses of barbiturates and scopolamine.⁷ Unless the head is high in a multigravida, or unless there is an occiput posterior, or some other complicated presentation, when the cervix is 3 to 4 fingers dilated in a multigravida, and 4 fingers dilated in a primigravida, the patient is taken to the delivery room, where the saddle block will be given.

We use a delivery table which can be elevated

as well as lowered at the head. An oxygen inhalation apparatus is constantly ready. An ampule of ephedrine sulphate is drawn up in a syringe before the saddle block is given. Plasma and other intravenous fluids are immediately available, and, as every patient has been tested for Kahn, Rh, and blood group before admission to the hospital, blood can be obtained from the blood bank within 10 minutes. Everything we are to use for the administration of the saddle block is assembled on a single tray. The needles and syringes are rinsed with distilled water, then with absolute alcohol, and dried with ether before being put up for autoclaving. We use a 22 gauge short bevel Pitkin needle, and, as suggested by Cullen,⁸ do not make a preliminary skin wheal with procaine. It is necessary to use a short beveled needle in order to lessen the trauma to the dura and also to make sure that all of the bevel is within the dura, otherwise some of the anesthetic agent will be deposited outside the dura (Fig. 2).

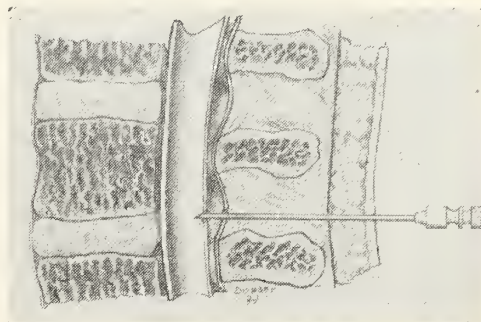


Fig. 2

When everything is ready, the patient's blood pressure is taken. A final rectal examination is made to verify the dilatation of the cervix, the station, and the rotation of the presenting part.

The puncture must be made under aseptic technique. The operator scrubs his hands, puts on sterile gloves, checks the needles, and mixes the nupercaine and glucose. As mentioned above, we use $\frac{1}{2}$ cc., or 2.5 mg. of $1/200$ nupercaine and $\frac{1}{2}$ cc. of 10 per cent glucose solution.

The patient is now assisted to a sitting position on the edge of the table (Fig. 3). She is asked to bend her head and rest it on the shoulder of the nurse. Her hands are crossed in her lap. The operator now paints her back with an antiseptic solution. As soon as she has finished a contraction, the spinal puncture is made. We routinely use the fourth interspace at the level of the crest of the ileum, unless it doesn't feel "easy," in which case the third is used. The needle is introduced through the skin, the ligamen-



Fig. 3

tum flavum and the dura. When there is a free flow of fluid, the bevel of the needle is turned downward. The hub of the needle is held firmly in the fingers of the left hand, and the heel of the left hand is rested against the back (Fig. 4). The puncture and injection can usually be made between the end of one contraction and the beginning of the next. Should the puncture be a bit difficult and a contraction begin before the injection can be given, we wait until it subsides. If

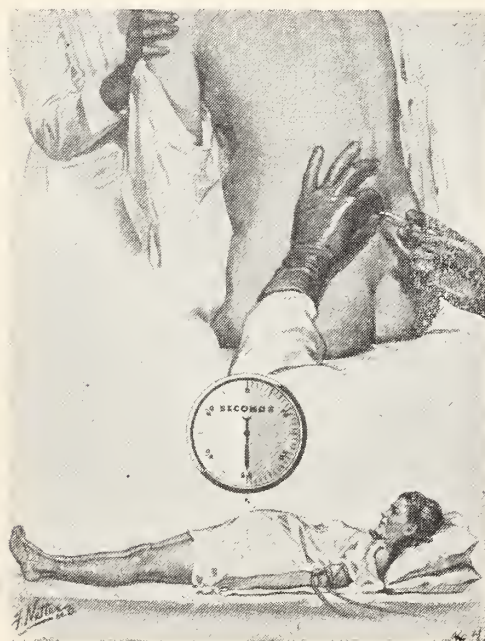


Fig. 4

the injection is made during a contraction, the anesthetic agent will be too widely dispersed, and the motor nerve involvement may occur, which in turn may interrupt labor. When the syringe is attached to the needle, fluid is aspirated to make sure the needle is still in place. Never withdraw more than 0.1 cc. of fluid. Injection is made at a steady rate, counting one thousand, two thousand, three thousand, so that not more than three seconds elapse before the injection is completed. The needle is withdrawn immediately. We allow the patient to sit up for 25 seconds after the injection. She is assisted in lying down with legs and body flat, and the head is elevated as high as possible by a firm pillow. This is to prevent the heavy solution from getting higher than T 10 and T 11.



Fig. 5

The blood pressure is now taken at intervals of two minutes for the next 20 minutes. Frequently there will be a slight gradual drop in the blood pressure of from 10 to 15 points. If there is air hunger, nausea, yawning, or a rapid pulse, inhalations of 100 per cent oxygen are begun at once. If the pressure goes below 80 systolic and has not begun to rise when the next reading is made, 25 mg. of ephedrine sulphate are given intravenously for the immediate effect, and 25 mg. are given intramuscularly for the prolonged effect. The legs are elevated to the vertical (Fig. 5) and, if delivery is imminent, the legs are left up in stirrups. This maneuver has the effect of giving the patient an autogenous transfusion

of from 600 to 800 cc. of blood. This is the amount of blood believed to be held in the lower extremities as the result of vascular dilatation and loss of muscle tone. When we first began to use the saddle block technic, we used ephedrine frequently. Now we seldom use it, but always have it on hand.

The relief of pain is most dramatic. The patient will lie quietly immediately following the injection. The patient will say that her legs feel numb and heavy. The other sign of a successful block is the complete relaxation of the external rectal sphincter and perineum. The patient will go to sleep, provided she has had adequate premedication.

The blood pressure will drop within 15 to 20 minutes if it is going to do so. By this time the anesthetic is fixed and will have reached its highest level. In a few cases, the patient will still complain of pain in the fundus. If this is noticed, you may lower the head of the bed about 5 degrees for 30 seconds. This will allow the anesthetic solution to ascend high enough to reach T 11 and T 12. While it is true that the greatest danger of blood pressure drop is within 20 minutes, we continue to take the pressure every five minutes. There is always a danger of a secondary drop if the patient is moved suddenly or jarred; consequently, we move the patients from delivery table to cart, and from cart to bed, gently. The patients are watched for at least one hour postpartum for signs of shock, fast pulse, bleeding, nausea or air hunger.

Following the saddle block, the fetal heart tones are checked each time the blood pressure reading is taken. Prolonged hypotension on the part of the mother will result in an insufficient placental oxygenation, and the fetal heart rate will rise and later become irregular. If this occurs, treatment is to raise the mother's blood pressure and to deliver the fetus as soon as possible.

The uterine contractions continue at about the same frequency as before the block. The mother has no desire to push. If the vertex is transverse or posterior when the anesthetic is given, it is unlikely that rotation will take place. We do not give a block to a patient in whom we know a posterior position is present until dilatation is complete and we can see what effect the second stage contractions will have on causing spontaneous rotation. If the rotation does not seem to be occurring easily, we go ahead with the block and complete the rotation as indicated. We prefer manual rotation but sometimes find the Kielland forceps useful.

When the fetal heart tones continue good, we wait for the descent of the head to a plus 4 or plus 5. Most of the patients are delivered by outlet forceps. A few deliver spontaneously. We do not hesitate to begin a forceps operation at station 0 or plus 1, using the axis traction forceps, if the fetal heart tones show any variation or if the second stage has lasted more than one hour without gradual descent. One hundred per cent oxygen is given continuously during the delivery.

Almost without exception, the babies cry immediately upon delivery of the head (Fig. 6). We



Fig. 6

wipe the face clean and use a rubber bulb to aspirate the nose and mouth. We proceed with the delivery slowly. As the anterior shoulder stems under the pubis, 1 cc. of pituitrin is given. We then wait until the uterus contracts, at which time the head is raised, and this allows the posterior shoulder to slip over the perineum. We do not pull the baby out, but allow the uterus to push it out. The cord is clamped and cut, and the baby given to the nurse. We keep a hand on the uterus, but do not massage or squeeze it.

If the placenta has not separated and delivered within 10 minutes, we assume that it will not do so spontaneously and make preparations for its removal. When we are ready and the patient has been repainted and redraped, we use Credé's method on the uterus gently. This is occasionally successful. We have had no difficulty in doing a manual removal of the placenta under

saddle block in the few cases in which we have found it necessary, but no doubt some will require supplemental anesthesia. The uterus is tense and irritable, and force must not be used.

Because of the profound relaxation of the perineum, we have been able to do a much higher percentage of midline episiotomies than with other types of anesthesia.

We have not measured the blood loss, but in only 1 case was bleeding excessive. Our clinical impression is that the amount of blood lost in the average case is less than formerly seen.

Occasionally, a case will not get any relief of pain, or so slight as to be of no value. In the few instances that this has occurred, the puncture seemed as good as any, the injection went smoothly, but anesthesia was insufficient. We wait 10 minutes, and, if the patient still complains and is not able to lie quietly during contractions, a second injection is given. We use the same amount of nupercaine and glucose as in the original injection. We have never seen this second dose fail. Neither have we seen a blood pressure drop follow it, regardless of what happened after the first injection.

The postpartum routine follows. Morphine sulphate, 1/6 grain, is given if the patient is restless or uncomfortable. A firm pillow is used as soon as the patient is in bed, and the backrest is allowed after six hours. Food is given as soon as the patient wishes to eat. Most will ask for milk or coffee immediately. An ergotrate tablet, 1/320 grain, is given every four hours for at least six doses, longer if indicated. A scultetus binder is applied at once; this is in line with the suggestion of Weintraub and will be discussed later. Whenever a difficult delivery has been done and there has been any intravaginal or intrauterine manipulation, a Foley catheter is inserted and left in place for 24 to 36 hours. Every patient is watched carefully for signs of bladder distention. Whenever the uterus is pushed up, and especially if to one side or the other, the patient is catheterized for retention. Catheterization is repeated every eight hours until the residual obtained is 50 cc. or less. If more than 500 cc. is obtained, the next interval before catheterization is cut down to six hours. The bladder is irrigated with normal saline each time, and 1/2 ounce of 1 per cent aqueous solution of mercurochrome is instilled into the bladder. The patient is allowed to sit on the edge of the bed eight hours after delivery and may stand up if she feels like it. She is encouraged to get out of bed 24 hours after delivery.

Results

We have been well satisfied with the procedure and its results. There have been two drawbacks to the method, but they seem to be of minor import in comparison to the difficulties and complications following other types of analgesia and anesthesia used for pelvic deliveries.

Table 1.—Results With Saddle Block

Good or Excellent.....	139
Fair	10
Poor	1
Total	150

One hundred thirty-nine cases were listed as good or excellent. In this category fell all patients in whom anesthesia reached the level of the umbilicus and who did not complain or move about with contractions. Ten cases were fair. In this group the anesthesia was midway between the symphysis and the umbilicus, and the patients complained some and moved a bit with contractions. The 6 cases requiring a second injection were included under this heading. One patient was rated as a poor result. She was a patient who had a third degree tear, following a delivery of a 9 pound 4 ounce baby in her first pregnancy. She and her husband had insisted on a caesarean section; we had maintained it wasn't necessary and that she would not have a bad time. She was able to feel her contractions and complained bitterly about her pain. Actually, we were able to deliver a 9 pound baby with the aid of a moderately sized mesiolateral episiotomy, with no additional anesthesia and no damage to the sphincter. She could have had a second injection, but the head was on the pelvic floor, and we thought it better to complete the delivery as rapidly as possible.

Many of these patients (78 were multigravida) had had a variety of other procedures with previous deliveries. Not one patient objected to the saddle block.

Table 2.—Number of Injections Per Patient

1 injection	144 Cases
2 injections	6 Cases
Total	150 Cases

One hundred forty-four cases required only one injection. Six cases were given a second block when the first gave neither anesthesia nor sufficient relief from pain.

Table 3.—Dilatation When Saddle Block Given

	No. Cases
Primiparas:	
3 Fingers	1
4 Fingers	11
Complete	60
Multiparas:	
3 Fingers	3
4 Fingers	22
Complete	53
Total.....	150

Since our object has been to provide anesthesia with one injection as often as possible, for delivery and repair of the episiotomy, few patients received a block until at least 4 fingers dilatation. Of the 72 primigravida, 1 received her injection at 3 fingers; 11 were at 4 fingers; and the remaining 60 patients were completely dilated. We all feel that multigravida will have somewhat shorter labors; consequently, 3 were given their block at 3 fingers, 22 at 4 fingers, and 53 when they were fully dilated. Several of these were given after the head had reached a plus 5 station.

Table 4.—Time from Block to Delivery

	No. Cases
Primiparas:	
1½ Hour	14
1 Hour	41
1½ Hours	13
2 Hours or More.....	4
Multiparas:	
1½ Hour	24
1 Hour	46
1½ Hours	6
2 Hours or More.....	2
Total	150

For the sake of brevity we have not listed the cases by exact time elapsed between injection of the nupercaine solution and delivery. Fourteen primigravida were delivered within 30 minutes following the block; 41 had their anesthesia between 30 minutes and one hour; 13 between one and one and one-half hours; and 4 were not delivered for two hours or more. In 2 of these cases the anesthesia lasted more than three hours in sufficient degree to allow perineal repair with no discomfort to the patient. Twenty-four multigravida delivered in less than 30 minutes; 46 in from 30 minutes to one hour; 6 in one and one-hours; and 2 cases went for two hours before being delivered. The 10 cases listed as having fair results and the 1 poor result, all had an episiotomy, and the repair was accomplished with no complaint from the patient.

Table 5.—Type of Delivery with Saddle Block

Spontaneous	4
Low or Outlet Forceps.....	128
Midforceps	7
Manual Rotation and Forceps.....	8
Breech	4
Total	151*

*Includes 1 Set Twins

Some writers have emphasized the fact that this procedure has not increased the operative incidence. In the 150 cases given saddle block only 4 were delivered spontaneously. One hundred twenty-eight cases were delivered by low or outlet forceps. This is not an increase in our personal operative percentage, because we have for years tried to follow the rule laid down

by DeLee" for prophylactic forceps. "when the head is well down on the pelvic floor, in complete anterior rotation, and has begun to part the levator ani pillars (and not before), the perineum and fascia over the levator pillar are incised and the child delivered by forceps." Mitchell¹⁰ considers outlet forceps those in which the head is at plus 5, and the low forceps from plus 3 to plus 5. We believe that, if these criteria are adhered to, there need be no increase in maternal or fetal morbidity or mortality. Seven patients were delivered by midforceps. As classified by Mitchell, they were at station 0 to plus 3. In the control series of 150 cases 15 patients were delivered by midforceps.

In the saddle block series 8 patients required manual rotation of a persistent OP or OT presentation. We routinely try to turn the head at the station found and, if this cannot be done, to push the head up until it will turn, overcorrecting so that an LOP becomes an ROA, and an ROP becomes an LOA; then we lead the head down and apply the posterior blade without removing the hand. In doing these rotations under saddle block one must exercise great care to do all manipulation between contractions. In a recent case, not included in this series, the contractions were so close together and the uterus was so tight that the baby could not be pushed up. Kielland forceps were applied with the head at a plus 3 station. Rotation was accomplished, and the delivery was easy, with the aid of a midline episiotomy. In our control series, there were 4 cases in which manual or forceps rotations were done. There is no doubt that the lack of voluntary muscular control, which makes it impossible for the patient to push, plus the extreme relaxation of the perineal floor, will prevent spontaneous rotation of many posterior and transverse presentations. Saddle block should not be used when a posterior or transverse presentation exists unless the obstetrician is adept at both manual and forceps rotation maneuvers. There were 4 breech presentations in this series. In breech presentations routine external versions are done after the thirty-second week of gestation. Two of the 4 cases were multigravida; 1 was uncooperative, and external version could not be done; the other had a thick abdominal wall which made manipulation impossible. The third case was a primigravida seen in consultation. The fourth was the second baby of the only set of twins in the series. All were assisted extractions, with Piper forceps to the after coming head. There were 3 breech extractions in the control series.

Table 6.—*Headache Following Saddle Block*

Incidence and Onset:	
1st Day	2
2nd Day	15
3rd Day	8
4th Day	2
5th Day	1
Total	28 Cases
18.6% in Series of 150 Cases	

Headache has always been one of the major drawbacks to all types of spinal anesthesia. Twenty-eight patients, or 18.6 per cent, complained of headache. The typical spinal headache is said to appear on the third postpartum day. Our percentage is somewhat higher than reported in other papers, but we have included all patients with headache, irrespective of when it appeared. Two patients complained on the first day; 15 on the second day; 8 on the third day; 2 on the fourth day; and 1 on the fifth postpartum day. The typical spinal headache is said to last two to four days. In our series 4 lasted one day; 9 two days; 8 three days, and one each for five, six and more than seven days.

Table 7.—*Headache—Duration*

	No. Cases
1 Day	4
2 Days	9
3 Days	8
4 Days	4
5 Days	1
6 Days	1
7 Days	1
Total	28

Table 8.—*Severity of Headache Following Saddle Block*

	No. Cases
1 Plus	15
2 Plus	10
3 Plus	2
4 Plus	1
Total	28

Fifteen were graded as 1 plus in severity. These lasted one to three days and were controlled by a scultetus binder and occasional doses of emperin and codeine.

Ten cases were considered 2 plus. These cases lasted three to five days and required regular doses of emperin and codeine.

Two cases were 3 plus. These patients complained of headache for five to six days and were never really comfortable when not lying down.

One patient had a 4 plus headache. She should not have had a saddle block, as she had a chronic draining ear, which was not discovered until after the delivery. She was hospitalized for 14 days, receiving intravenous glucose and penicillin.

The cause of postspinal headache is still de-

batable. Various theories include trauma, seepage of fluid from the puncture hole in the dura, and precipitation of some irritating substance in the anesthetic fluid. Weintraub¹¹ has suggested an interesting theory, that when the patient raises her head or stands up, there is an orthostatic hypotension and a tachycardia, due to splanchnic dilatation. He has suggested the use of a tight binder around the abdomen to prevent the dilatation of the splanchnic vessels. We use a scultetus binder with a folded towel inside to increase the pressure. This binder is difficult to keep in place and presents quite a nursing problem. It is comfortable, though, and each patient wears one throughout her hospital stay. An exact record of headache was not kept in the control series; however, one patient to whom we had planned to give a saddle block was crowning before we could get to her, and she received only a small amount of ether by the open drop method. She had a 3 plus headache.

Table 9.—*Incidence of Catheterization After Saddle Block*

	No. Cases
Total Catheterized (Incl. Foley)	116
Foley Catheter	65*
No. Catheter After Foley Removed	9
No. Catheterization Required	34
Total Cases in Series	150

*47 Primip.; 18 Multip.

Most writers say little about the bladder in patients who have had saddle block. In this series, we have found the care of the bladder to be of primary importance and our greatest problem. A Foley retention catheter was inserted on the delivery table in 18 multigravida and 47 primigravida. It was removed in 24 hours as a routine measure, and the patient was supposed to be catheterized once for retention. However, this was not done in 9 cases, and they had no subsequent retention. The Foley was used in all cases requiring midforceps, manual rotations, and manual removals of the placenta, and in those cases where the bladder had been distended during labor and where there appeared to be edema around the urethral opening following delivery. Of the entire series, 116 patients, including the 65 in whom a Foley was used, were catheterized one or more times. Thirty-four patients did not require catheterization. Table 10 shows the analysis of the total number of patients who were catheterized. Table 11 shows the number of times each case was catheterized after the Foley was removed. Table 12 shows the number of catheterizations in those cases where a Foley was not used. In the control series only 40 cases were catheterized. Table 13 shows this breakdown.

Table 10.—Number Catheterizations Required—Saddle Block

No. Catheterizations	Primip.	Multip.
1	29	4
2	16	14
3	7	7
4	7	6
5	2	3
6	1	4
7	4	1
8	1	1
9	1	1
10	1	1
12	1	1
13	1	1
19	1	1
Totals	64	43 = 107
Foley Alone		9
Total Cases Catheterized		116

Table 11.—Number Catheterizations After Removal of Foley—Saddle Block

No. Catheterizations	No. Cases
1	23
2	13
3	5
4	4
5	2
6	3
7	2
8	1
10	1
12	1
Total	55

Table 12.—Number Catheterizations Without Foley—Saddle Block

No. Catheterizations	No. Cases
1	10
2	19
3	4
4	7
5	3
6	2
7	3
9	1
13	1
19	1
Total	55

Table 13.—Number Catheterizations Required—Other Anesthetics

No. Catheterizations	Primip.	Multip.
1	6	3
2	4	3
3	5	2
4	4	3
5	1	0
6	6	3
Total	26	14

We have tried to follow the principles laid down by Te Linde¹² on the care of the postoperative bladder. We believe that it is better to keep the bladder empty, regardless of the number of catheterizations required.

In the past, various drugs have been tried including 1 per cent mercurochrome and 5 per cent argyrol injected into the bladder, potassium acetate by mouth, and prostigmine hypodermically. None has been uniformly successful. Lintgen¹³ has recently written an excellent paper on this subject. He found 15 cc. of 0.5 per cent solution of mercurochrome injected into the bladder post-operatively most effective.

We feel that the constant watching of the bladder has been effective. One hundred sixteen cases were catheterized a total of 366 times, an

average of 3.55 times per patient. In the saddle block group there were no cases of cystitis or pyelitis (Table 14), and in the other group there were 4 cases. The use of a retention catheter did not cut down the number of catheterizations per patient appreciably, for the 56 patients who had a Foley were catheterized 153 times, an average of 2.73 times per patient, while the 51 patients who did not have a Foley were catheterized a total of 177 times, an average of 3.4 times per patient, but we will continue to use it in selected cases.

Table 14.—Complications

	Saddle Block	Other Anesthetics
Cystitis and Pyelitis	0	4
Morbidity	0	15
Inertia	0	8
P. P. Hemorrhage	1	3
Stillbirths	0	3
Neonatal Deaths	0	2
Manual Removal of Placenta	2 (Both Primip.)	3 (1 M., 2 P.)
Total	2	38

None of the saddle block group was morbid, while 15, or 10 per cent, of the control group had a temperature of 100.4 F. on two or more days, not counting the day of delivery.

There were no cases of inertia in the first group, as opposed to 8 in the control series.

Blood loss was not measured accurately. An estimation was made of the amount in each case, however, and one patient who received a block lost 500 cc. It is our clinical impression that there is less bleeding. In the control group 1 patient was estimated to have lost 1,000 cc. and 2 patients more than 500 cc.

The babies are in much better condition than following inhalation anesthetics. A tracheal catheter was used once in the 151 babies. This baby had a tight cord looped twice around the neck, and the heart tones had been irregular for at least one-half hour before the cervix was completely dilated. The oxygen resuscitator was used in this same case, the only time in our series. There were no stillbirths in the saddle block group, and 3 in the control group. No neonatal deaths followed the saddle block, and there were two in the other group.

Manual removal of the placenta was necessary two times in the saddle block group. We feel that a placenta should separate within 10 minutes if it is going to do so spontaneously. Both of these cases were primigravida. In the control series 1 multigravida and 2 primigravida had manual removals.

Summary

1. Saddle block anesthesia, using nupercaine as an agent, was used in 150 unselected cases, with uniformly good results for mother and child.

2. Proper training and experience in using spinal anesthesia are required.
3. Adequate help in the delivery room, oxygen, blood, plasma and vasoconstrictor drugs are necessary.
4. Headache is the principal complication.
5. Inability to empty the bladder is the next most important complication.
6. There seems to be no adverse effect on the fetus.

ACKNOWLEDGMENTS

1. To Dr. J. H. Walton and the Ciba Pharmaceutical Products for permission to reproduce the illustrations from their book "Control of Pain."

2. To Dr. Dennis Dorsey, who drew the illustration of the vertebrae, showing the structures through which the spinal needle passes.

BIBLIOGRAPHY

1. Parmley, R. T., and Adriani, J.: Saddle block anesthesia with nupercaine in obstetrics. *Am.J.Obst.&Gynec.*, lli:636-640 (October) 1946.
2. Adriani, J., and Roman-Vega, D. A.: Saddle block anesthesia. *Am.J.Surg.*, lxxi:12-18 (January) 1946.
3. Corning, J. L.: Spinal anesthesia and local medication of cord. *New York State J.Med.*, xlii:483-485 (October 31) 1885.
4. Bier, August: *Deutsche Ztschr. f. Chir.*, li:361-369, 1899.
5. Bieter, R. N.: Applied pharmacology of local anesthetics. *Am.J.Surg.*, xxxiv:500-510 (December) 1936.
6. Pitkin, G. P., and McCormack, F. C.: Controllable spinal anesthesia in obstetrics. *Surg.Gynec.&Obst.*, xlvii: 713-726 (November) 1928.
7. Lundgren, A. T., and Boice, W. A.: Results of amnesia and analgesia in 175 consecutive cases of labor. *Surg.Gynec.&Obst.*, lxx:120-122 (January) 1940.
8. Cullen, Stuart C.: *Anesthesia in General Practice*. Chicago, Year Book Publishers, 1947, p. 140-144.
9. DeLee, Joseph B.: *Principles and Practice of Obstetrics*, ed. 6th. Philadelphia, W. B. Saunders, 1936, p. 1047-1048.
10. Mitchell, R. M.: Symposium on recent advances in gynecology and obstetrics; forceps for delivery—their use and abuse. *S.Clin.North America*, xxv:1436-1451 (December) 1945.
11. Weintraub, F., Antine, W., and Raphael, A. J.: Postpartum headache after low spinal anesthesia in vaginal delivery and its treatment. *Am.J.Obst.&Gynec.*, liv:682-686 (October) 1947.
12. Te Linde, R. W.: *Operative Gynecology*. Philadelphia, J. B. Lippincott, 1946, p. 61-64.
13. Lintgen, Charles: Comparative study of efficacy of certain drugs in promoting evacuation of female bladder following gynecological operations. *Am.J.Obst.&Gynec.*, lvi:1112-1118 (December) 1948.

SADDLE BLOCK ANESTHESIA IN OBSTETRICS:

Report of 500 Cases

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The search for a drug or a combination of drugs to alleviate the pain of labor and childbirth has been going on for many years and undoubtedly will continue. Numerous analgesics and anesthetics have been used with varying degrees of success to obtain this relief. In the past, it generally has been true that the procedure giving the greatest degree of pain relief usually has the disadvantage of being difficult technically or harmful to either the mother or the newborn infant.

The term "saddle block" anesthesia was advanced by Adriani and Roman-Vega to designate low spinal anesthesia limited to the lower spinal segments and involving primarily the perineal region. The skin level of anesthesia extends usually from midhigh to a point approximately mid-

way between the symphysis pubis and the umbilicus. The effect on the lower extremities varies from a slight numbness or motor weakness to complete motor paralysis. It is not a new procedure, having been used previously in rectal and genitourinary surgery. In saddle block anesthesia the patient is placed in the upright sitting position, and, as a result, the small dosage of concentrated drug which is injected gravitates to the conus of the dural sac. The gravitation is enhanced by the addition of 5 per cent glucose to the nupercaine, thereby markedly raising the specific gravity of the injectable solution over that of the normal spinal fluid. Spinal anesthesia was first used in obstetrics in 1900 by Kreis and again in 1928 by Pitkin, and in 1930 Cosgrove used nupercaine intrathecally for vaginal delivery. The procedure was abandoned, however, due to the high incidence of nausea, vomiting, headache, and too high levels of anesthesia. This undoubtedly resulted because the patient was in the lateral prone position, and the level of anesthesia was not as readily controlled.

In 1946 Parmley and Adriani introduced saddle block anesthesia with nupercaine in obstetrics and reported the first 100 cases delivered under this method. Since December 1946, the author has completed 500 cases, using essentially the same technic described by Parmley and Adriani. It is hoped that this report will help to further establish the position of this anesthetic procedure in the armamentarium of obstetric anesthesia. This series was conducted on both private and charity patients in four different hospitals and in cooperation with several obstetricians.

Technic

A sterile tray is prepared shortly before its use is anticipated containing the following:

- (1) Two 2 cc. syringes.
- (2) One hypodermic needle for skin infiltration.
- (3) One 22 gauge I.M. needle for fascia and muscle.
- (4) One 20 gauge short bevel spinal needle.
- (5) One blunt 18 gauge needle for drawing solutions into syringes.
- (6) One ounce medicine glass for antiseptic.
- (7) Several small applicators for painting the back.
- (8) One 2 cc. ampule ephedrine-procaine solution.
- (9) One 2 cc. ampule heavy nupercaine, 1/400 in 5 per cent dextrose. (Each cc. contains 2.5 mg. nupercaine hydrochloride.)

Note:—The heavy (hyperbaric) nupercaine has only recently been available; previously the anesthetist mixed 1/200 nupercaine with 10 per cent of dextrose to produce the injectable solution.

The solutions are kept in a jar containing 70 per cent alcohol and are readily available. Various methods of draping were attempted, but it was difficult to keep the drapes in place, and it was finally decided that, by preparing a wide area of the back, draping was unnecessary.

The saddle block anesthesia may be administered either in the labor or delivery room, depending upon the progress of labor and the desires of the obstetrician. When the patient is ready for her anesthetic, she is placed in a sitting position, bent slightly forward with her head down, and is supported in this position by an assistant. The back is then painted with antiseptic solution, and the skin and deeper tissues infiltrated with ephedrine-procaine solution. The spinal needle is then inserted between L 3 and L 4, and a free flow of spinal fluid obtained. The second 2 cc. syringe containing 1 cc. (2.5 mg.) heavy nupercaine is attached to the spinal needle after 0.1 cc. spinal fluid has been aspirated to assure the operator that the needle has not been dislodged. The solution is injected rapidly.

It is important that the injection be made between uterine contractions, so the increased spinal pressure at the time of contraction does not force the anesthetic agent up into the thoracic region. The needle is then slowly withdrawn. The patient is kept in an upright position for 25 seconds and then assisted to a recumbent position, and her head placed on a folded pillow. She then should remain flat for 10 minutes to allow for diffusion and fixation of the drug. Following this, the patient may, when ready, be moved to the delivery room or, if already there, placed in stirrups for delivery. In the early part of our series, multiple blocks were used, and the majority of the patients were anesthetized in the labor room. Later, however, with the use of proper premedication and better timing, practically all the patients were blocked in the delivery room, and one injection sufficed for the remainder of labor, delivery and repair if needed. The patients obtained almost immediate relief of their pain, so that within 5 to 10 minutes women who had been noisy and uncooperative became quiet and interested in the further progress of their delivery. Once the anesthesia is established, the patient no longer has any desire to bear down with her pains during a uterine contraction and will not do so unless directed.

It is remarkable that so many cases did receive adequate anesthesia when one considers that the same dosage of drug, time interval, and level of injection are used in a group of patients who vary so in height and weight. In cases of

failure or waning spinal effect of the anesthetic, there is no danger to a repeated injection performed in the same manner, because the dosage of the anesthetizing agent is so small, namely 2.5 mg. of heavy nupercaine.

Ephedrine-procaine solution was used routinely in all patients unless there was a definite contraindication to the use of ephedrine, such as hypertension or toxemia. Routine use of ephedrine-procaine solution prophylactically was instituted after careful observation of the blood pressure in the first 100 cases. A drop of 10 to 20 mm. of mercury was noted in practically all cases. However, this drop was transitory in those cases in which ephedrine-procaine was used; whereas, in those cases in which procaine alone was given, the drop in blood pressure was more prolonged and, in several instances, much more severe, necessitating therapeutic measures. Therefore, it was felt that prophylactic use of ephedrine-procaine solution prevented these few severe blood pressure drops, and it was injected in the remainder of this series. There were no deleterious effects noted from the use of the ephedrine-procaine solution.

Caudal anesthesia, which most nearly compares to saddle block in its action in the relief of the pain of childbirth, is considerably more difficult technically, and the percentage of excellent results obtained, even in the most experienced hands, is much lower. Further, because of anatomic differences in caudal canals, the anesthetist could not assure the patient that relief of pain would occur following injection of the anesthetic agent. This is not true of saddle block anesthesia, as it will be shown that the failure rate is almost negligible.

Time of Spinal Injection

The first 100 cases in this series were selected, uncomplicated, full term pregnancies. The remainder were unselected, including twins, known breech and posterior positions, toxemias, cardiacs, etc.

There is one important problem concerning the use of saddle block anesthesia which has not been sufficiently stressed. That is the timing, or the moment when the heavy nupercaine should be injected. Some writers use this method for delivery only, and it is given when the dilatation is complete and the head is on the perineum. This is satisfactory in those patients who have had a rapid progress of labor and have been fairly comfortable without the use of excessive premedication. Those having a more prolonged labor, especially primipara, and those having heart disease or toxemia may be blocked much earlier,

rather than further depressing the mother and infant with overdoses of sedatives, to which later is added a narcotizing general anesthetic. However, it must be stated that blocking the patient too soon, as was done on several occasions in the early part of this study, will definitely retard the progress of labor and increase the incidence of occiput posterior positions. In 5 patients who were blocked too early labor was stopped for a period of three to five hours. Two of these were given a second low spinal anesthetic at a more opportune time with excellent results. The other 3 were delivered under gas anesthesia.

For the past year, unless there was definite medical indication for earlier low spinal anesthesia, primiparas have been blocked when they were almost complete and the head was below mid-pelvis. Multiparas were blocked when they had 5 to 6 cm. dilatation and the presenting part was at midpelvis or below. Our reason for emphasizing the importance of the descent of the head lies in the fact that, when the anesthesia becomes effective, there is often enough relaxation to allow the head to lose station if it is not at mid-pelvis or lower.

The vast majority of our patients delivered within one and one-half to two hours, and only the single injection was necessary. The average duration of complete pain relief was one hour and 25 minutes. Perineal anesthesia was much more prolonged, and the average range was two and one-half to three and one-half hours.

Various sedatives and analgesic drugs were used alone and in combination to adequately control these patients during their progression to sufficient dilatation and descent of the presenting part, prior to the injection of the nupercaine. Demerol, 100 mg., and scopolamine, 1/150 grain, proved to be the most commonly used and most satisfactory premedication.

Results

In this series of 500 obstetric patients there were 196 primigravida (39.2 per cent) and 304 multigravida (60.8 per cent). Of this total group 462 (92.4 per cent) were operative deliveries, and 38 (7.6 per cent) delivered spontaneously. The obstetricians conducting this series with the writer usually advocated routine outlet forceps, hence the low incidence of spontaneous deliveries. It is an established fact that saddle block anesthesia does increase the incidence of operative vaginal deliveries, but in competent hands this is not considered a contraindication. There were 4 sets of twins and 5 breech presentations.

Anesthetic results are classified as follows. There were 461 patients (92.2 per cent) who ob-

tained complete relief of pain for the remainder of their labor delivery and repair. Routine episiotomy was performed in all but a few multigravida. Seventeen cases (3.4 per cent) were listed as fair. This group complained of pain over the symphysis pubes when traction was applied to the forceps but otherwise were comfortable. The saddle block was not supplemented in these 17 patients. Twenty patients (4.4 per cent) were classified as poor; this includes the 3 failures previously described and 17 other patients who experienced inadequate uterine and/or perineal anesthesia. These cases were all supplemented with gas anesthesia. In 17 cases nitrous oxide was used, and cyclopropane in the remaining 3 patients.

In the total series there were 54 (10.8 per cent) occiput posterior positions and 38 (7.6 per cent) transverse positions. Of the occiput posteriors, 40 were delivered from that position and 14 were rotated to the occiput anterior and delivered. Thirty-four of the transverse positions were rotated to the occiput anterior; the other 4 patients were delivered from the occiput posterior position. The obstetricians concerned stated that the ease with which rotation could be accomplished was much greater under saddle block anesthesia, and they did not feel that a posterior or transverse position of the occiput was any contraindication to the use of this method of anesthesia. The blood loss was estimated to be considerably less with this method than when inhalation anesthesia was used.

The 500 patients were delivered of 504 infants, 482 living full term infants, 14 premature living infants, 6 stillborn full term infants and 2 stillborn premature infants. Of the 496 living infants, only 3 required resuscitation.

Complications

The incidence of postspinal headache was considerably higher in our series than in reports by other authors. Sixty-one patients (12.2 per cent) complained of moderate to severe headache during the puerperium. It has been difficult to evaluate this complication, and we have no explanation to offer as to why the incidence of headache should be much higher following saddle block anesthesia than that following routine surgical spinal anesthesia. Many therapeutic measures have been tried with varying degrees of success. The majority of the patients were relieved with aspirin and codeine. However, the most severe cases required absolute bed rest for several days. Postspinal headache was the only complication of note occurring in this series.

Blood pressure changes were controlled by the use of prophylactic ephedrine, as previously de-

scribed. There were no neurologic complications nor were there any drug reactions.

Comment

The use of nupercaine saddle block anesthesia for vaginal delivery in obstetrics leads to a quiet orderly sequence of events from the late first stage to the time the mother is returned to her room. The rush and confusion in the delivery room is avoided, the mother is comfortable and cooperative, and the newborn is not depressed and cries immediately. The procedure is simple to administer and has a marked advantage over inhalation anesthesia in the handling of cardiac patients, toxemias, and those suffering from upper respiratory diseases, acute or chronic. The primary disadvantage was the occurrence of post-spinal headache.

Five hundred obstetric patients were delivered by the vaginal route under low spinal saddle block anesthesia using small doses of heavy nupercaine. This method proved advantageous to the patient, the newborn infant, the delivery room personnel and the obstetrician. In the hands of competent anesthesiologists, it is safe and simple procedure with minimal complications.

Saddle block anesthesia is, in the writer's opinion, the obstetric anesthesia of choice at the present time.

BIBLIOGRAPHY

1. Parmley, R. T., and Adriani, J.: Saddle block anesthesia with "nupercaine" for obstetrics. *South.M.J.*, xxxix:191-195 (March) 1946.
2. Roman-Vega, D. A., and Adriani, J.: Prolonged spinal anesthesia: description of simplified technique for nupercaine. *Surgery*, xvii:524-532 (April) 1945.
3. Adriani, J., and Roman-Vega, D. A.: Saddle block anesthesia. *Am.J.Surg.*, lxxi:12-18 (January) 1946.
4. Parmley, R. T., and Adriani, J.: Saddle block anesthesia with nupercaine in obstetrics. *Am.J.Obst.&Gynec.*, lii:636-640 (October) 1946.
5. Schmitz, H. E., and Baba, G. P.: Low spinal nupercaine anesthesia in obstetrics. *Am.J.Obst.&Gynec.*, liv:838-847 (November) 1947.
6. Pitkin, G. P., and McCormack, F. C.: Controllable spinal anesthesia in obstetrics. *Am.J.Obst.&Gynec.*, liv:838-847 (November) 1948.
7. Cessgrove, S. A.: Nupercaine subdurally in obstetrics. *Am.J.Obst.&Gynec.*, xxii:763-767 (November) 1931.
8. Lull, Clifford B., and Hingson, Robert A.: Control of Pain in Childbirth. Philadelphia, J. B. Lippincott, 1944.

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CARCINOMA OF THE PROSTATE WITH POSTERIOR EXTENSION INTO THE RECTUM: A Report of 3 Cases

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Hugh Young, in 800 prostatic cancer cases,²⁰ saw no more than a dozen instances in which the rectal mucosa was invaded or ulcerated (an incidence of 1½ per cent, according to Smith and Mintz¹²). Barringer² had reported a 2 per cent incidence. It is the purpose of this paper to recount the reasons for this anatomic rarity.

Even when considered among the most insidious of diseases, carcinoma of the prostate retains a high position of notoriety. In the male, cancer selects the prostate three times more frequently than any other organ, being present in one out of every five men presenting themselves for relief of prostatic obstruction (Judd,⁷ Rich,¹⁶ Moore¹³). Strohm¹⁷ states that bilateral sciatica is almost indicative of prostate malignancy.

According to Moore,¹³ this disease is demonstrated at autopsy in 23 per cent of victims dying in their sixth decade of various other causes; as the ninth decade is approached, this figure is 29 per cent. Baretz,¹ in reviewing occurrence of the disease, confirms Young's earlier conclusion that one out of every 25 men past 60 years will have prostatic malignancy. While many have no clinical symptoms, the microscope repeatedly discloses malignant disease where only benign hypertrophy was suspected (variously quoted between 2.6 per cent¹¹ and 10 per cent¹⁹). If investigators have placed these figures too high, the inaccuracy may be overcome by the increased watchfulness which their consideration will promote. The disease is elusive and ubiquitous. It has been reported in a 15 year old boy,¹⁴ and Hamm⁶ emphasizes Rathbun's observation that symptoms are disproportionately severe in relation to their duration and the degree of obstruction present.

Prostate cancers have a regrettably long period of early quiescence, which permits over half of them to extend beyond the capsular limits. McGavin¹¹ states that 56 per cent give evidence of local or distant spread when first hospitalized. These are disclosed by history and clinical examination, not including cystoscopic examinations.

Motz, quoted by Cabot,³ indicates that 40 per cent of these cancer victims die within seven months after initial symptoms; 25 per cent live one year; 25 per cent live two to ten years.

Moore¹³ reveals that carcinoma has the posterior subcapsular portion of the prostate as its site in three-fourths of the cases. This is confirmed by Muir, quoted by McGavin,¹¹ who fur-

thermore states that this is the locale for only 6 per cent of all benign hypertrophy, indicating cancer site to be quite independent of hyperplasia, the latter usually occurring in the lateral and median lobes. According to the American school of thought, therefore, cancer does not represent carcinomatous degeneration of a benign adenoma. Fifty per cent of the cases develop where there is no hypertrophy.⁸ A hard layer between the apex and the verumontanum may be considered diagnostic of cancer.¹⁸

Cancer predilection for the posterior portion of the gland, coupled with the facts thus far presented, would indicate rectal extension to be a favored means of spread. Rectal obstruction might be anticipated, if not from actual cellular invasion, then from encroachment of the bowel lumen by a bulging tumor mass. Any cancer, however, usually grows along the line of least resistance; in the case of a bladder neoplasm, into the cavity along the mucous membrane, thus having ample space within which to grow. The result in bladder neoplasm is, therefore, usually late metastases. A prostatic cancer, on the other hand, has no space in which to grow. In addition, anterior and posterior limitation by bladder and Denovilliers' fascia, respectively, constitute a tension which acts as a factor in early spread. Extension is most often between these two limiting fasciae.

We are thus prepared to view with some understanding the progressive local malignant extension wherein adjacent structures are involved with predictable order, which are (1) most commonly, the seminal vesicles, (2) the membranous urethra, (3) quite rarely, the urinary bladder, and, finally, (4) the rectum, the most unusual site for spread of these cancers. These are essentially the findings of Barringer.²

The impervious barrier of Denovilliers' fascia is effective to the extent that rectal involvement from prostatic carcinoma is noteworthy.

Engelbach, quoted by Kickham,¹⁰ in 1888 first described a rectal form of prostatic malignancy which developed in the absence of genitourinary symptoms. Hartman¹⁰ in 1913, cited such a case, with cancer of the prostate so closely simulating a rectal neoplasm that an unsuccessful attempt was made to resect it.

The converse rectal carcinoma spreading anteriorly into the prostate is no oddity,¹⁵ occurring in 31½ per cent of autopsies performed on patients dying of cancer of the rectum.⁹

In 111 reported cases, Young, quoted by Cabot,⁴ summarizes the implication of local invasion: the seminal vesicles were indurated in 88

per cent (later quoted at 66 per cent in an enlarged series²¹); the intervesicular space was involved in over 90 per cent; the membranous urethra in 61 per cent; and only 1 case revealed invasion of the adjacent rectum. Thirteen cases had revealed rectal adherence to the prostatic capsule on an inflammatory basis, an important differential point through which the pathologist may disclose the erroneous inclusion of such cases in a series reported on a cancerous basis *per se*. A difference in criteria possibly accounts for higher incidence reports from reliable workers, such as Deming,⁵ who found 15 per cent rectal wall invasion in 100 cases.

Kickham¹⁰ reports 4 cases of prostatic malignancy with predominate signs and symptoms referable to the rectum (constipation, tenesmus, mucus discharge at the anus). Only one of these displayed actual microscopic evidence of tumor cell invasion into the rectal muscularis.

Case No. 1

J.D., an 80 year old white male, was first seen on Oct. 20, 1947. His general health had been good, but stammering at urination, with diminution in stream caliber and nocturia, had been increasingly troublesome for 10 years. Entrance complaint was acute urinary retention for three days' duration. There had been no recent weight loss nor previous hospitalization. A number 20 Foley catheter was inserted and left in place.

On examination, the patient was pale and thin. Rectal palpitation revealed a moderately enlarged prostate with several very hard nodules. There was a superimposed polypoid rectal mass 3 cm. in diameter, soft and freely movable. The kidneys were nonpalpable, and no abdominal masses were felt. Blood pressure on admission was 155/80.

The hemoglobin was 11.8 gm.; red blood cells numbered 3,710,000, and white blood cells 6,900. Total protein was 7.6 gm. Urinalysis revealed clumps of pus cells.

A cystoscopic examination was performed on October 22, and during instrumentation the tissues gave the unyielding sensation of malignancy. There was moderate medial lobe hypertrophy. Retrograde pyelograms were not done, but intravenous urograms taken the same day were essentially normal, as was the roentgenogram of the chest. The KUB film did reveal a round area of increased density of the right ilium, just lateral to the sacroiliac joint, which did not appear to be malignant.

On October 23 a proctoscopic examination was performed, and the instrument was easily passed 16 cm. A polypoid mass, 3 by 4 cm. in diameter,

was encountered lying on the anterior wall opposite an enlarged nodular prostate gland. Multiple tissues were taken, and at a biopsy the pathologist reported:

"The tissue from the rectum shows necrotic inflammatory debris containing fragments of neoplastic tissue. This is composed of irregular acini suggestive in appearance of adenocarcinoma of the prostate."

Opinion at that time was tentatively adenocarcinoma, grade 3, of the prostate gland, with rectal extension.

Prior to transurethral prostatectomy on October 27, two 500 cc. whole blood transfusions were given. Small amounts of tissue were removed from the median and lateral lobes. The post-operative course was afebrile, and the patient was discharged on the fifth day. Further microscopic studies of rectal tissue and prostatic shavings confirmed the origin of the neoplasm to be in the prostate.

Comment—This man had reached the age where incidence of prostatic carcinoma approaches 30 per cent. Had genitourinary symptoms, of minor consequence for 10 years, remained latent rather than culminated in acute retention, entrance complaints might well have been gastrointestinal. The secondary lesion was already as large as the primary, though actual rectal obstruction probably was not imminent. Microscopically, there was definite rectal spread, including the muscularis, though the mucosa was free from involvement. Kickham¹⁰ doubts that the mucosa *per se* is ever invaded, even in advanced cases of the disease.

Follow-up on this patient finds him feeble but free from gastrointestinal or genitourinary symptoms. At 80 growth has been slow, and neither stilbesterol therapy nor orchidectomy has been deemed advisable.

Case No. 2

H.W.R., a 56 year old white male, had been observed by his local physician since 1924 for complaints suggestive of nervous exhaustion. He was seen intermittently and in 1939 began complaining of low back pain. With a period of bed rest and procurement of a back support he recovered.

When next seen in 1946, he was complaining of right flank pain, nocturia two or three times, and some gaseous distention. There was upper right quadrant and flank tenderness. Colon and gallbladder roentgenogram studies were negative. Blood pressure then was 150/80.

Three months later he developed a headache and abdominal pain associated with constipation. Blood pressure then was 168/88, and examination

revealed an irregular mass high on the rectal shelf anteriorly.

Biopsy was done on May 14, 1946, and the pathologist reported that there was invasion of the rectal submucosa by carcinoma acini resembling those often seen in adenocarcinoma of the prostate.

He hemorrhaged following the biopsy, and transfusions were required. The patient was placed on stilbesterol, which he could not tolerate, even in moderate dosage. Throughout the summer he lost weight, and, in September 1946, the testes were removed. The blood pressure rose throughout the fall of 1946 until November 2 when it was 210/110, with retinal findings indicative of essential hypertension, group 3, with involvement of the nervous system. He was now able to tolerate 10 mg. of stilbesterol per week.

Later examination revealed weight and strength loss, a blood urea nitrogen of 161.0 and creatinine 21.4 mg. per 100 cc. The diagnosis elsewhere was generalized abdominal carcinomatosis. They did not substantiate the opinion that the origin was prostate.

The patient was returned home, underwent a slow but definite downhill course, and died in uremia on June 16, 1947. Autopsy was performed by the pathologist who had earlier studied the rectal tissue, and the origin of the disease in the prostate was confirmed.

Comment—Here gastrointestinal symptoms predominate almost to the exclusion of the genitourinary, minimal nocturia arousing little curiosity in this age group. No cystoscopic examination was done, but its contribution would be doubtful.

Case No. 3

G.C.P., a 59 year old white male, was first admitted to the hospital May 2, 1946, with a two year history of progressive constipation. Stools were becoming increasingly smaller in caliber, and weekly enemas were necessary. There was no diarrhea, mucous nor melena. Two months earlier, March 1946, pain in the left buttock was first noted, which subsequently radiated down the posterior thigh, leg, and even to the bottom of the foot. Pain was not aggravated by coughing or sneezing.

Further questioning disclosed this patient to have had nocturia, three or four times, for four years and fair passage of urine. There was never any retention, but residual urine on admission was 200 cc.

Physical examination was essentially negative except for rectal examination, where the prostate was 1 plus enlarged and extremely hard and tender. The mucosa was rough and adherent.

May 9, 1946, a proctoscope was passed 20 cm. At 7 cm. there was ulceration near 6 o'clock. This was obviously rectal encroachment by the prostate, plus superimposed circulatory changes. Biopsy was not done in this hemorrhagic area. The lesion had so invaded the rectum as to make surgery inadvisable.

At this time inorganic phosphorus was 2.7 mg. per 100 cc.; acid phosphatase 4.1 units; alkaline phosphatase 3.6 units. Urinalysis was negative. The hemoglobin was 13.2 gm., and there were 4,170,000 red blood cells. At no time subsequently was anemia any more marked than this. Roentgenologic studies revealed no evidence of metastases in the pelvis; there was hypertrophic spurring of the lumbar vertebrae. Chest and colon films were negative. Hospitalization was for 10 days, and he remained afebrile. For the first three months following discharge, he was placed on stilbesterol, 15 mg. per week. After that, he took the drug intermittently.

Pelvic roentgenograms taken Sept. 30, 1946, revealed no bony metastases. April 9, 1947, x-rays showed an area of decreased density in the left ilium having the appearance of metastatic malignancy.

By April 28, 1947, the patient had lost 20 pounds (total loss over a 2 year period). A right direct inguinal hernia was repaired, and bilateral orchidectomy performed. There was still no anemia.

The patient gradually underwent strength and weight loss and died on May 14, 1946. Permission for autopsy was not obtained. Clinically, there was no doubt that carcinoma of the prostate was the cause of death. While rectal symptoms remained major complaints from the onset, there was progressive gradual rectal encroachment with ulceration. Complete rectal obstruction never resulted.

Comment—This patient developed severe constipation as an initial symptom, probably the most marked of the three presented. Leg pain was thought to be metastatic, and, in view of disease progress, that explanation remains most likely. According to the criteria set down earlier, this case cannot be included as a *bona fide* example of rectal extension by carcinoma of the prostate, for essential microscopic information is lacking.

Summary

This discussion entails consideration of a rare manifestation of prostatic neoplasm. Three cases of carcinoma of the prostate with rectal extension are presented, and modes of malignant spread are briefly discussed, illustrating the fact that genitourinary disease independent of, or super-

imposed upon, gastrointestinal disorders may lead the surgeon into serious difficulty. Reasonable familiarity with urologic problems and willingness to cystoscopy doubtful cases may avoid chagrin from attempting to resect a rectal growth originating in the prostate. The disease need only be thought of, and a specimen of tissue placed in the hands of a competent pathologist will usually indicate which surgical or medical approach is in order.

BIBLIOGRAPHY

1. Baretz, L. H.: Management of carcinoma of prostate. *Geriatrics*, i:432-437 (November-December) 1946.
2. Barringer, B. S.: Carcinoma of prostate. *Surg.Gynec.& Obst.*, xxxiv:168-176 (February) 1922.
3. Cabot, Hugh: Editor, *Modern Urology in Original Contributions by American Authors*. Philadelphia, Lea & Febiger, 1936, Vol. I, p. 842.
4. *Ibid.*, Vol. I, p. 851.
5. Deming, C. L.: Cancer of prostate and seminal vesicles treated with radium. *Surg.Gynec.&Obst.*, xxxiv:99-118 (January) 1922.
6. Hamm, F. C.: Carcinoma of prostate: a symposium—clinical aspects. *Brooklyn Hosp. J.*, iv:84-90 (October) 1946.
7. Judd, E. S.: Cancer of prostate. *Surg.Gynec.&Obst.*, xx:274-277 (March) 1915.
8. Judd, E. S.: Surgical pathology of prostate. *Collect. Papers Mayo Clin. & Mayo Found.* Philadelphia, W. B. Saunders, 1914, Vol. vi, p. 295-307.
9. Kickham, C. J. E., and Bruce, N. H.: Urological complications in malignant disease of rectum. *J.Urol.*, xli:541-556 (April) 1939.
10. Kickham, C. J. E.: Carcinoma of prostate simulating primary rectal malignancy. *J.Urol.*, xxxv:342-348 (March) 1936.
11. McGavin, D.: Latent carcinoma of prostate. *Brit.J.Surg.*, xxv:612-620 (January) 1938.
12. Mintz, E. R., and Smith, G. G.: Autopsy findings in 100 cases of prostatic cancer. *New England J.Med.*, cxxi:479-487 (September 13) 1934.
13. Moore, R. A.: Morphology of small prostatic carcinoma. *J.Urol.*, xxxiii:224-234 (March) 1935.
14. Nicholson, N. J.: Carcinoma of prostate in youth. *Brit.J. Surg.*, xxxii:533-534 (April) 1945.
15. Oppenheimer, G. D.: Late invasion of bladder and prostate in cancer of rectum or rectosigmoid following abdomino-perineal resection. *Ann.Surg.*, cxvii:456-467 (March) 1943.
16. Rich, A. R.: On frequency of occurrence of occult carcinoma of prostate. *J.Urol.*, xxxiii:215-223 (March) 1935.
17. Stroh, J. G.: Carcinoma of prostate: study of 429 cases. *Urol.&Cutan.Rev.*, xiv:770-771 (December) 1941.
18. Wesson, M. B.: Carcinoma of prostate; unusual metastases. *Am.J.Surg.*, xii:537-542 (June) 1931.
19. Wilson, L. B., and McGrath, B. F.: Surgical pathology of the prostate. *Collect.Papers Staff St. Mary's Hosp.*, Mayo Clin. Philadelphia, W. B. Saunders Co., 1911, Vol. iii, p. 247-319.
20. Young, H. H.: Cancer of prostate. *Ann.Surg.*, l:1144-1233 (December) 1909.
21. Young, H. H., and Frontz, W. A.: Cancer of lower genitourinary tract. *J.Urol.*, i:505 (December) 1917.

LIGATION OF THE COMMON ILIAC VEIN FOR REPEATED PULMONARY EMBOLISM:

Case Report

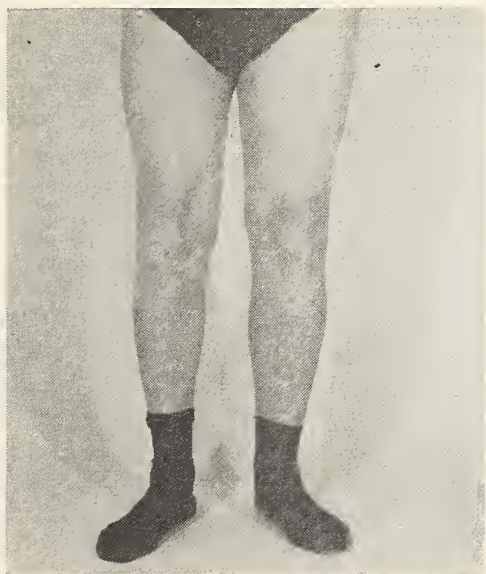
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The occurrence of pulmonary embolism, incident to thrombophlebitis or phlebothrombosis in the lower extremities, is a disaster which often takes, and always threatens, life. In recent years, certain prophylactic measures undertaken following surgery or childbirth have been helpful in preventing this complication. These measures include deep breathing following anesthesia, active leg exercises while the patient is bed confined, early ambulation, and the use of the anticoagulants heparin and dicumarol.

Nevertheless, instances of pulmonary embolism

continue to occur, often with fatal outcome. If the patient is fortunate enough to survive one such accident, it becomes the responsibility of the physician or surgeon to decide what measures, if any, should be taken to prevent a recurrence. If active steps are undertaken, a decision between medical and surgical methods must be made.

The origin of pulmonary emboli is usually a thrombotic process involving the veins of the lower extremities or pelvis. If phlebitis exists and embolism has not occurred, conservative or medical methods alone are usually indicated. Once pulmonary infarction has occurred, however, the ligation of one of the major veins of the lower extremities should be considered; after repeated embolism, surgery is almost mandatory as a life-



saving measure "before the patient's luck is used up."

The level at which ligation should be done has been a matter of dispute. In 1944 Homans stated convincing reasons why the site of choice should be either the common iliac vein, or the inferior vena cava in bilateral cases. Clinically, as well as anatomically, the collateral circulation is better following ligation of the common iliac vein than after ligation of the external iliac vein or the femoral vein. As a result, edema of the lower extremity will subside more quickly, and normal conditions of venous circulation will return more rapidly. Another advantage is that interruption of the common iliac vein reduces the possibility of embolism from pelvic venous plexuses draining into the internal iliac vein. These are often simultaneously involved in the thrombotic process.

C.E.B., male, age 72, apartment house custodian, was admitted to the hospital on Nov. 15, 1946.

Past History: He had had typhoid fever at age 28 and recurrent attacks of mild thrombophlebitis in the left leg since 1930 (three episodes). Eight years ago he had injection treatment for varicose veins in the left leg. The left leg has been somewhat larger than the right for years, but no recent edema until present attack.

Present Illness: On Oct. 28, 1946, he noted swelling and redness of the left ankle, with pain on walking. The following day he had an attack of severe pain in his chest, with dyspnea and reddish brown sputum. On November 8 a similar attack of chest pain occurred, and on November 13 a third attack occurred during the night, associated with extreme dyspnea and cyanosis; the attending physician thought that the patient was about to die.

Physical Examination: Elderly white male, acutely ill, with marked edema of the left leg and thigh and localized areas of redness in the popliteal area and over the medial anterior aspect of the thigh. There was marked local heat in these areas. Temperature on entrance was 100.2 F. There was tenderness over the course of the femoral vein in the left thigh, extending up above the inguinal ligament. Patient was dyspneic, slightly cyanotic and very apprehensive.

X-ray of Chest: "Parenchymatous infiltration over the region of the left upper lobe. This cannot be differentiated between pneumonia or pulmonary infarction."

Diagnosis: Acute iliofemoral thrombophlebitis, with repeated pulmonary embolism and infarction.

Operation: On Nov. 15, 1946, through a left McBurney incision and retroperitoneal approach, the left common iliac vein was doubly ligated in continuity with heavy nylon.

Postoperative Course: Following surgery, there was some increase in edema of the left leg and thigh. This was controlled by elevation and application of elastic bandages. Patient ran a mild septic temperature (up to 101 F.) for one week but was afebrile after the eighth postoperative day. Penicillin was used in moderate doses; dicumarol and heparin were not used. The postoperative course was uneventful except for difficulty in voiding, due to an enlarged prostate. Repeated catheterization was necessary. The patient left the hospital on Dec. 14, 1946. By that time, there was complete subsidence of chest symptoms, and swelling in the left leg was greatly diminished. By Feb. 15, 1947, edema of the left leg had entirely disappeared.

Present Condition: As of February 1949, there has been no recurrence of phlebitis in the left leg. The patient has been well and active, and no edema has been present since February 1947, three months after ligation of the common iliac vein.

Conclusion: A case of repeated pulmonary embolism (three episodes) with infarction, incident to unilateral iliofemoral thrombophlebitis has been reported. Treatment was by ligation of the common iliac vein. No anticoagulant drugs were used. The patient has been returned to good health, with no adverse effects on the return circulation of the affected leg.

BIBLIOGRAPHY

1. Homans, J. C.: Deep quiet venous thrombosis in lower limb: preferred levels or interruption of veins, iliac sector or ligation. *Surg. Gynec. & Obst.*, lxxix:70-82 (July) 1944.
 2. Shafiroff, B. G. P.: Ligation of inferior vena cava. *Am. J. Surg.*, lxxiii:621-623 (May) 1947.
 3. Bancroft, F. W.: Proximal ligation and thrombectomy for phlebothrombosis of femoral and iliac veins. *Ann. Surg.*, cxxi:175-184 (February) 1945.
- Fig. 1. Photograph of C.E.B., age 74, taken February 1949. Ligation of left common iliac vein was performed in November 1946. Patient is well and active. No edema present since February 1947.

AN UNUSUAL CASE OF NONTROPICAL SPRUE WHICH RESPONDED TO FOLIC ACID

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Following the introduction of synthetic folic (pteroylglutamic) acid, there were many reports on the beneficial effect of this vitamin on those macrocytic anemias in which a megaloblastic bone marrow was present. In addition to its effectiveness in controlling these anemias, it was found by Spies and his associates¹ to be effective in the treatment of patients with sprue, not only in correcting the associated anemia, but also in controlling the other clinical manifestations of the disease. Subsequent reports by many other investigators²⁻⁷ have in general confirmed these observations in both the tropical and nontropical forms of the disease, although some recent reports^{8,9} have indicated that folic acid is not always effective in controlling the gastrointestinal manifestations of nontropical sprue.

The concept that tropical and nontropical sprue represent the same entity has grown, most writers agreeing that they represent merely different stages, or different grades of severity, of the same deficiency state.^{6,10} It is also recognized that this syndrome may be brought about, not only by a dietary deficiency,¹¹ but also by interference with intestinal absorption, and that sprue or a sprue-like symptom complex may result

from a wide variety of causes. Nontropical sprue is characterized by a chronic progressive remitting course, with diarrhea, steatorrhea, glossitis, weakness, and by a macrocytic type of anemia in most cases. It may progress to a more advanced stage in which loss of weight, emaciation, osteoporosis, hypoproteinemia and altered glucose utilization are outstanding features. The stools are characteristically bulky, frothy, foul smelling, and contain an unusually high percentage of fat. The concomitant macrocytic anemia with a megaloblastic bone marrow results from a deficient absorption of the hematopoietic principle. There are no distinctive pathologic lesions to be found at autopsy in patients dying of sprue, as there has been only a severe derangement of intracellular metabolism, which one is incapable of measuring at the autopsy table.

The following case is presented because of the unusual circumstances under which the sprue syndrome developed and because of the effectiveness of folic acid in controlling the clinical manifestations of the illness.

B. L., a white American male aged 48, developed a pain in the back in 1923 and subsequently was subjected to an appendectomy and gallbladder drainage, without relief of his symptoms. Pain and tenderness appeared in the right lower quadrant of the abdomen, and soon a sinus developed, with constant drainage of purulent material. Three surgical procedures were performed from 1923 to 1926 in an attempt to close the sinus, but these were unsuccessful. He then noted that most of the purulent material which formerly drained through the sinus was now passed in the urine.

He was admitted to the University Hospitals in September 1927, with complaints of a draining sinus in the right lower abdominal quadrant, painful urination, pain in the region of the lumbar spine with radiation to both thighs, and a weight loss of 35 pounds. Examination revealed an emaciated male with a sinus opening above Poupart's ligament on the right side, through which purulent sanguinous material exuded. Methylene blue given by mouth came through the sinus opening, and mecurochrome instilled into the bladder also appeared in the drainage. X-ray examination following lipiodol instillation into the sinus opening showed an extensive tract extending from the right side of the pelvis to the bladder wall. This was treated by irrigations without surgical intervention, and he left the hospital much improved.

He returned to this hospital in April 1931 because of pain in the region of the sacrum and

the passage of pus in the stools. Examination revealed that the previously draining sinus had closed but that there was a tender swollen area posterior and to the right of the rectum. Following incision and drainage of this abscess, a sinus tract was found extending along the sacrum, a biopsy of the wall revealing only chronic granulation tissue. No tubercle bacilli could be demonstrated, and no specific causative bacteria were found.

He was not seen again until September 1945, but he stated that in 1935 he had developed symptoms of acute intestinal obstruction, for which several feet of intestine were resected. Since the operation, he had been chronically ill, with a diarrhea of five to six soft voluminous stools daily, anorexia, weakness, shortness of breath, and loss of 53 pounds in weight, from 170 to 117 pounds. He had noted gaseous abdominal distention, with some epigastric pain, which was relieved by food and soda, and he had received one blood transfusion and one injection of liver extract from his local physician. Examination at this time revealed a marked pallor, without jaundice and without abnormal neurologic findings. Examination of the abdomen was normal except for well healed operative scars. X-rays of the stomach and colon were normal, but a motor meal, with films taken each hour for six hours after barium by mouth, revealed an abnormal pattern in the small bowel, which was interpreted as being compatible with a nutritional deficiency such as is seen in sprue. The plasma proteins were 6.43 gm., with 3.76 gm. of albumin, 2.35 gm. of globulin, and 0.32 gm. of fibrinogen. A glucose tolerance test, with 50 gm. of glucose orally, showed the following blood sugar levels at half-hour intervals: 95 (fasting), 182, 200, 173 and 150. The blood calcium was 10 mg. per cent; phosphorus 3.5 mg.; cholesterol 115 mg.; and bilirubin 1.4 mg. Stool analysis showed the total solid content to be 14.1 per cent and fat 7.28 per cent, and that 51.8 per cent of the solid material consisted of fat. Free hydrochloric acid was present in the gastric secretions, and the gastroscopic examination was normal. There were 6.7 gm. of hemoglobin per 100 cc. of blood, 2.08 million erythrocytes, 9,600 leukocytes with a normal differential count, 240,000 platelets, 0.8 per cent reticulocytes, and an hematocrit of 51 per cent. The blood smear showed macrocytosis, and slight anisocytosis and poikilocytosis.

A tentative diagnosis of sprue was made, and he was given a high protein, low carbohydrate, and low fat diet, with supplementary vitamins and Brewer's yeast. He was unable to tolerate parenteral liver extract because of a sensitivity

but received an oral liver extract. He improved on this therapy so that the stools decreased from ten light colored frothy stools per day to one or two soft stools. He gained in weight and strength, and his blood count and hemoglobin improved during the hospital stay, the hemoglobin at the time of discharge from the hospital being 12.9 gm. and the red count 3.5 million.

His symptoms recurred after returning home, and he developed a mild ankle edema and some numbness of the lower extremities. He returned to the hospital at intervals while continuing the above treatment and was readmitted to the hospital on Jan. 5, 1947, because of a more severe recurrence of symptoms. His skin was pale and dry, and he had lost weight to 119 pounds. His plasma proteins were low but with a normal albumin-globulin ratio. X-ray examination revealed the presence of an iliocolic fistula. His erythrocyte count was 1.51 million, hemoglobin 5.4 gm., and the hematocrit 21 per cent. The blood smear revealed macrocytosis, with some variation in size and shape of the erythrocytes. The reticulocyte count was 0.5 per cent. It was thought that he had a sprue syndrome, and the same dietary and vitamin therapy was continued, with the addition of 10 mg. of folic acid twice daily.

His erythrocyte count increased from 1.23 million to 2.77 million within 23 days after the institution of this treatment, and his hemoglobin from 6 gm. to 9.5 gm., with a reticulocyte peak of 8.6 per cent. Although he was improving rapidly, he was then given three blood transfusions to hasten his recovery in preparation for an exploratory laparotomy. At operation it was found that only about four feet of small intestine remained and that the end of this had been surgically anastomosed to the midportion of the transverse colon. No surgical correction was possible. He recovered from the operation satisfactorily, and under dietary and folic acid therapy his diarrhea disappeared, and he gained rapidly in weight and strength. Five months later he returned with an erythrocyte count of 4.5 million, 13.8 gm. of hemoglobin, and an hematocrit of 44 per cent. His plasma proteins were now normal. The numbness and tingling of his hands and feet had increased to some extent, and there was a loss of vibratory sensation over the lower extremities, although the reflexes were normal. During the next five months his blood count remained at a normal level, and the diarrhea did not recur. The numbness and tingling persisted, however, and, since he could now tolerate liver extract, this was given intramuscularly in an attempt to prevent further neurologic complications.

Extensive studies¹¹ have shown that the basis

for tropical sprue is a dietary deficiency, and it is recognized that this syndrome may result, not only from an inadequate diet, but also from inadequate absorption of food elements from the gastrointestinal tract. This malabsorption may be the result of a variety of lesions, and the resultant symptoms may fulfill in part or entirely the criteria for the diagnosis of sprue. This case is presented to illustrate the development of this symptom complex as a result of inadequate absorption of essential food elements and vitamins from the gastrointestinal tract following an extensive surgical resection of the bowel.

The extensive surgical resection of small bowel in this patient, in whom only four feet of small intestine remained, and this anastomosed to the midportion of the transverse colon, would seem to be an adequate explanation for the persistent diarrhea on a purely mechanical basis. If this were true, one would not anticipate significant benefit from vitamin therapy; and the fact that the administration of folic acid controlled this feature of his illness, whereas dietary treatment alone was inadequate, indicates that malabsorption of essential food elements played a major part in producing this manifestation. Inadequate intestinal absorption has been shown to produce this spruelike syndrome and a macrocytic anemia,¹² with megaloblastic arrest of the bone marrow, due to deficient absorption of the hematopoietic principle. The efficacy of folic acid in controlling the clinical manifestations in this patient would indicate that the diarrhea was due to a nutritional defect, since the same diet without folic acid had failed to bring it under adequate control. The maintenance of good health, normal bowel habits and normal hematologic values has been most dramatic under this form of therapy.

A diagnosis of pernicious anemia is not tenable in this patient, although he developed some numbness and tingling of his extremities, which was associated with objective neurologic findings. Suarez¹³ has not encountered combined degeneration of the cord in a large series of patients with tropical sprue under treatment with folic acid. In spite of this observation, and although folic acid has adequately controlled the clinical and hematologic manifestations, we have begun the use of liver extract in an attempt to prevent the possible development of neurologic complications.

BIBLIOGRAPHY

1. Spies, T. D., Vilter, C. F., Koch, M. B., and Caldwell, M. H.: Observations on anti-anemic properties of synthetic folic acid. *South.M.J.*, xxxviii:707-709 (November) 1945.
2. Garcia Lopez, G., Spies, T. D., Menendez, J. A., and Lopez Toca, R.: Folic acid in rehabilitation of persons with sprue. *J.A.M.A.*, cxxxii:906-911 (December 14) 1946.
3. Suarez, R. M., Spies, T. D., and Suarez, R. M., Jr.: Use of folic acid in sprue. *Ann.Int.Med.*, xvi:643-677 (May) 1947.
4. Berry, L. J., and Spies, T. D.: Present status of folic acid. *Blood*, i:271-306 (July) 1946.

5. Spies, T. D., Garcia Lopez, G., Milanes, F., and Aramburu, T.: Synthetic folic acid; effectiveness of conjugated form in treatment of tropical sprue, addisonian pernicious anemia and nutritional macrocytic anemia. *J.A.M.A.*, cxxxiv:18-20 (May 3) 1947.
6. Darby, W. J., Jones E., and Johnson, H. C.: Effect of synthetic lactobacillus casei factor in treatment of sprue. *J.A.M.A.*, cxxx:780-786 (March 23) 1946.
7. Spies, T. D., and others: Observations on treatment of tropical sprue with folic acid. *J.Lab.&Clin.Med.*, xxxi:227-241 (February) 1946.
8. Davidson, L. S. P., Girdwood, R. H., and Innes, E. M.: Folic acid in treatment of sprue syndrome. *Lancet*, i:511-515 (April 19) 1947.
9. Weir, J. F., and Comfort, M. W.: Folic acid therapy in non-tropical sprue: results of treatment in 7 cases. *J.Lab.&Clin.Med.*, xxxii:1231-1241 (October) 1947.
10. Hanes, F. M.: Diagnostic criteria and resistance to therapy in sprue syndrome. *Am.J.M.Sc.*, cciv:436-443 (September) 1942.
11. Castle, W. B., Rhoads, C. P., Lawson, H. A., and Payne, G. C.: Etiology and treatment of sprue; observations on patients in Puerto Rico and subsequent experiments. *Arch.Int.Med.*, lvi:627-699 (October) 1935.
12. Barker, W. H., and Hummel, L. E.: Macrocytic anemia in association with intestinal strictures and anastomoses; review of the literature and report of 2 new cases. *Bull. Johns Hopkins Hosp.*, lxi:215-256 (April) 1939.
13. Suarez, R. M.: Editorial correspondence; comments on folic acid. *New England J.Med.*, cccxviii:34-35 (January 1), 1948.

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March 16, 1949

Summary of Clinical Record

A 70 year old white man was admitted to the University Hospitals on Oct. 13, 1948, and died on Nov. 30, 1948. He had been in good health until 10 years before admission. At that time he noted numbness of the left thumb, gradually spreading to other fingers of the same hand. Five years before admission the patient first noted wasting of the small muscles of the left hand. Two years before admission he began to notice generalized weakness, but he continued to work. Ten months prior to admission he noted progressive numbness of both feet and legs. The generalized weakness was greatest up the legs and feet and was accompanied by paresthesia of the feet and dizziness on exertion. Within four months the patient noted ataxia and loss of position sensation in his feet. Three months later he began to have substernal nonradiating pain related to exertion and relieved by rest. This was accompanied by shortness of breath on exertion. There had been no weight loss, abdominal pain, nor bleeding from the gastrointestinal tract. One sister had died of anemia at 62 years of age, and one brother died of anemia at 64 years of age.

At the time of admission, physical examination showed a well developed, well nourished, white man of the stated age. There were excoriations in the skin of the back and ankles. The mucous

membranes and sclerae were pale. Fundusoscopic examination showed several small hemorrhages and an old scar. The lungs were clear to auscultation and percussion. The heart was slightly enlarged to the left in the fifth interspace. The rhythm was regular, with an occasional premature beat. There was a soft systolic murmur, heard at the apex and in the aortic area. The blood pressure measured 125/55 mm. Hg. Examination of the abdomen was difficult because of voluntary muscular spasm. The prostate was somewhat enlarged symmetrically. There was atrophy of the muscles of the left arm and hand, especially of the thenar eminence. There was slight weakness of grip and of the small muscles of the left hand. There was foot drop on the right, with atrophy of the muscles of the calf. Neurologic examination revealed the following: biceps jerk, 1/1; knee jerk, 2/1; tendo Achilles, 2/0; plantar, flexion/flexion; ankle clonus, 4/0. Sensation was intact to all modalities. The cranial nerves were intact. Coordination tests were

cult blood were always positive. Spinal fluid examination showed clear fluid, no cells, normal pressure, with free rise and fall. The total spinal fluid protein was 52 mg. per 100 ml. The spinal fluid Wassermann test was negative. The colloidal gold curve was negative. A neurologic consultant made the diagnosis of progressive muscular atrophy. A urologic consultant diagnosed benign prostatic hypertrophy. An EKG was read as normal. The patient ran a normal temperature and pulse rate, except that numerous transfusion reactions occurred with a slight rise in the temperature at these times.

The patient was given blood transfusions, liver, iron and vitamins. He stated that he began to feel better and seemed more alert. The hemoglobin varied from 4 gm. to 7.5 gm. per 100 ml. The erythrocyte count varied from 1,110,000 to 2,970,000 per cu.mm. The leukocytes varied from 2,100 to 4,300. The differential leukocyte count remained approximately the same as on admission, except that the monocytes rose to 9 per cent on one occasion. The platelet count remained low, never rising above 24,000 per cu. mm. The reticulocytes never were recorded higher than 3.9 per cent. Bleeding and coagulation times were normal. The clot retractility was slight. The osmotic fragility of the erythrocytes was normal. The prothrombin time was 57.8 seconds compared to 40.7 seconds for the control.

On Oct. 19, 1948, an x-ray examination of the gastrointestinal tract with barium meal was interpreted as normal. On October 25 the colon was examined with a barium enema, and diverticula were visualized. On November 8 a motor meal of barium was given and interpreted as showing hypermotility of the small intestine, without a lesion being demonstrated. An ophthalmologist diagnosed anemic retinopathy, with the possibility of leukemia not eliminated.

On November 22 he developed a tender, indurated red, hot area on the left buttocks, presumably at the site of parenteral injection. The leukocyte count rose to 21,000 per cu. mm., and 17 per cent band polymorphonuclears and 63 per cent segmented polymorphonuclears were recorded in the peripheral blood. There was no rise in temperature. He developed marked anorexia and weakness. By November 27 the patient had a generalized purpuric rash and was passing tarry stools. Hykinone and penicillin were given. More blood transfusions were given. On November 27 the hemoglobin was 5.2 gm. per 100 ml.; erythrocytes, 1,690,000 per cu. mm.; leukocytes, 44,200. The differential count revealed 22 per cent band polymorphonuclears, 60 per cent segmented poly-

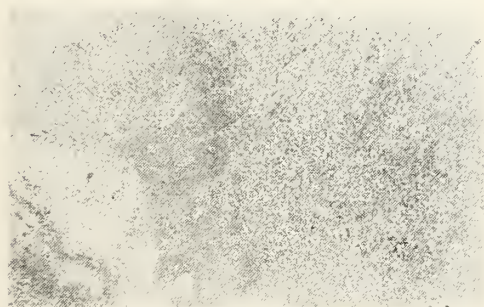


Fig. 1. Duodenum Ulcer.

normal. The gait was shuffling, due to the right foot drop. No ataxia was noted.

The laboratory findings were as follows: hemoglobin, 6.5 gm. per 100 ml.; erythrocytes, 1.92 million per cu. mm.; leukocytes, 2,650. The differential leukocyte count showed 6 per cent band polymorphonuclears, 8 per cent segmented polymorphonuclears, 3 per cent basophils, 75 per cent lymphocytes, 8 per cent monocytes. The platelets were 8,000 per cu. mm. The reticulocytes were 0.9 per cent. The urine was negative. The blood urea nitrogen was 28 mg. per 100 ml., and the creatinine 1.6 mg. The blood Wassermann test was negative. The plasma protein was 8.45 gm. per 100 ml. (albumin 4.5 gm., and globulin, 3.95 gm.) An x-ray film of the chest was interpreted as "healthy chest"; the Danzer ratio was 0.53. The sternal bone marrow was reported as hyperplastic in all elements. A gastric analysis showed 65 degrees of free acid and 85 degrees total acid. Repeated stool examinations for oc-

morphonuclears, 1 per cent esinophiles, 9 per cent lymphocytes and 8 per cent monocytes.

The patient became rapidly worse. He passed tarry stools and new purpuric spots appeared. On November 29 he complained of a burning substernal chest pain similar to that previously noted. In spite of therapy, the patient continued to decline rapidly and died at 0900 hours on Nov. 30, 1948.

Dr. W. Fowler (Internal Medicine): This 70 year old patient presented a rather complicated and puzzling picture, and I think perhaps it would be better if we took it piecemeal and tore this protocol to pieces in order to get at the problem. He was 70 years of age at the time he was admitted to the hospital, and he stated that his illness began 10 years before, at which time he noted some numbness of the left thumb. This gradually spread to involve the other fingers of the same hand, and five years later he noticed atrophy of the small muscles of that hand. Two years before admission he noticed generalized weakness but continued to work. I think that this generalized weakness two years before his admission marks the onset of the primary condition which brought him to the hospital. The protocol goes on to state that 10 months prior to admission he had noticed progressive numbness of both feet and legs, generalized weakness, and some dizziness on exertion. The weakness was greatest in the legs and feet. Within four months the patient noticed ataxia and loss of position sense in the feet. His local physician was consulted at that time and made a diagnosis of anemia. It is to be noted that the patient had a sister and a brother who had died of anemia at the ages of 62 and 64 years, respectively. This part of the history, with the neurologic complications, the finding of anemia, and the anemia in the brother and sister immediately brings to mind the possibility of pernicious anemia. But, if we may skip down to the physical examination, we find that there was atrophy of the muscles of the left hand and left arm, especially of the thenar eminence, a weakness of the grip, and certain changes in the reflexes. The biceps jerk was 1/1; the knee jerk, 2/1; the tendo Achilles, 2/0; plantar, flexion/flexion; and there was ankle clonus on the right. Sensations were intact in all respects. Coordination tests were normal and no ataxia was noted. These findings are not typical of subacute combined sclerosis of the cord. We find, however, that he did have an anemia and that the spinal fluid examination was normal. The department of neurology at that time made a diagnosis of progressive muscular atrophy. If we may

explain these neurologic complications on the basis of progressive muscular atrophy, perhaps we can dispose of that part of the subject at this time and return to the question of pernicious anemia a little later.

The next point to be noted in his history is that shortly before his admission to the hospital, he began to have substernal pain which was non-radiating, related to exertion, relieved by rest, and accompanied by shortness of breath. One might judge from these symptoms that the patient had coronary artery sclerosis, and one might also raise the question as to how much his anemia played in the production of this pain. It is of interest to note that while he was in the hospital he again had burning substernal pain similar to that which he had previously noted. This was not associated with a drop in blood pressure nor an increase in the pulse rate. Substernal pain of this type can-



Fig. 2. Infarct of Spleen.

not be explained on the basis of anemia alone. Anemia *per se* does not produce precordial pain. One never finds this type of pain in children even though they are severely anemic, so that, even though his erythrocyte count was below 2 million at the time of admission, we have to look further to explain the precordial pain which he was having. Precordial pain does occur in patients with severe anemia, but only in those individuals who have coronary artery sclerosis. The anemia will accentuate and bring it out, but it is not the primary cause of the pain, and consequently I think one would have to say that this patient had coronary artery sclerosis. There was nothing that would indicate an attack of acute coronary occlusion. So much, then, for neurologic manifestations, the progressive muscular atrophy, and the precordial pain.

The next part of the picture is related to the anemia. The anemia had been found by his local physician shortly before he was admitted to the hospital. It is of interest to note that there had been no loss of weight prior to the time that he came to the hospital, and he also stated that there

had been no bleeding from the gastrointestinal tract. In the physical findings it is noted that he had evidences of anemia and that there were small hemorrhages in the fundi. The heart was slightly enlarged, which would fit in with the diagnosis of coronary sclerosis. There is little in the examination of the abdomen that is of value here. The spleen was not palpable on any occasion while he was in the hospital, and no note is made of any enlargement of the lymph nodes. The neurologic manifestations have been discussed. In the laboratory findings, we note that the patient had a hemoglobin of 6.5 gm. per 100 ml., an erythrocyte count of 1.92 million per cu.mm., and a leukocyte count of 2,650. The first consideration that we would have to bring up would be the possibility of this being pernicious anemia. You recall that he had certain neurologic findings which were suggestive and that his history included the fact that a sister and brother had died of some type of anemia. All of these would be extremely suggestive of pernicious anemia. However, if you analyze the blood findings, you find that the color index is not significantly elevated and that it is not a macrocytic type of anemia. It is true that he does have a leukopenia, but there is no evidence or history of jaundice in this patient and no elevated bilirubinemia. He does have a lymphocytosis of 75 per cent, a relative lymphocytosis, and the platelets are low (8,000). The platelet count is too low to correspond to uncomplicated pernicious anemia. The platelets are lowered in pernicious anemia, but rarely do they get down to 8,000. One cannot rule out the diagnosis on that finding, however. Although he had certain findings that were suggestive of pernicious anemia, he did not have subacute combined sclerosis of the cord, and the bone marrow was not at all suggestive of pernicious anemia. We find also that a gastric analysis showed a fairly high degree of free hydrochloric acid. He had a free acid of 65 degrees and a total acidity of 85, which does not go along with pernicious anemia. I think it is a pretty safe rule that, if the patient has free acid in his gastric contents, he does not have pernicious anemia. That will not always hold true, as rare cases have been described of pernicious anemia that did have some free acidity. But, as a rule, that is a pretty good indication that you are dealing with some other type of anemia. So, with the gastric acidity, the sternal marrow, the neurologic features explained otherwise, the blood smear not being typical, I think we can exclude pernicious anemia as a diagnosis in this patient.

The next possibility that comes to mind is

that this anemia was due to hemorrhage. He states in his history that there had been no bleeding from the gastrointestinal tract, although later on in the course of the physical examination we find that repeated stool examinations for occult blood were always positive. All the specimens gave a 4 plus reaction to blood, and one or two of them were tarry stools, so that there had been some bleeding from the gastrointestinal tract. However, the hemorrhage that the patient was having while he was in the hospital would not account for his hematologic findings. The color index from chronic hemorrhage is low. The color index in this patient was about normal. More significant than that, however, is a leukocyte count of 2,600. One does not get a leukopenia as a result of bleeding. If any change occurs in the leukocyte count as a result of hemorrhage, it will be an increase. Also we find that the platelets are low, and low platelets do not go with the anemia that you get as a result of chronic hemorrhage. So, I think that, on the basis of the examination of the smear, the lack of a hypochromic anemia, the low leukocyte and platelet count, we can exclude the possibility of this being a chronic hemorrhagic type of anemia. If there had been bleeding from the gastrointestinal tract sufficient to produce this degree of anemia, it probably would have been noticed by the patient, because it required the loss of a large amount of blood from the intestinal tract to get the count down as low as we find in this individual. It does occur, however, in carcinoma of the cecum, in which occult blood is lost over a long period of time and is not apparent to the patient. We found earlier in the history that this patient had lost no weight, and it would be unusual to have a carcinoma of the colon, or elsewhere, of from 2 to 10 years duration without it producing some weight loss in the individual. Also, there had been no abdominal pain or other gastrointestinal symptoms, no diarrhea, and no history of gastrointestinal disturbance here which might lead one to think that there was intestinal bleeding from a local cause.

Another possibility that would have to be considered is idiopathic thrombocytopenic purpura. If that were the diagnosis, then the anemia that this patient had again would be on the basis of hemorrhage, and, as we pointed out, the anemia is not the type that one gets with chronic hemorrhage. Also, with idiopathic thrombocytopenic purpura, the platelets are low and the leukocyte count remains normal. Here we have a condition which has dropped the leukocyte count to 2,600, so that the picture is not that of idiopathic thrombocytopenic purpura.

A hemolytic anemia, of course, would have to be considered, but again we find in the examination that the fragility of the erythrocytes was normal, the patient was not jaundiced, and there was no history of jaundice. If a blood count were as low as this as a result of a hemolytic anemia, it would certainly lead to a certain degree of jaundice that would have been picked up upon his admission to the hospital or would have been noticed before he came in. I think we can exclude the possibility of this being hemolytic in type.

Aplastic anemia results in a normal color index, a reduction in the leukocyte count, which is primarily at the expense of the granulocytes, and also a reduction in the platelets. All of these features are present, and I don't believe that from the first blood examination here one could exclude the possibility of this being aplastic anemia.

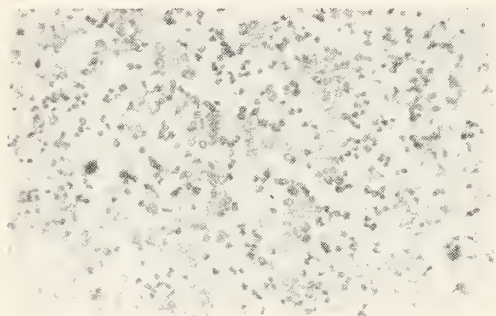


Fig. 3. Bone Marrow. Reticulohistiocytic Hyperplasia.

But, if you will notice later on in the course of his illness, he had a leukocytosis of 44,200 as a result of a minor abscess in the thigh. The infection did not produce a febrile reaction, so that the count went to 44,000 as a result of an infection which was not severe enough to produce a temperature rise. That is not the type of reaction that one would get with aplastic anemia, but still it is a possibility that would have to be considered and cannot be ruled out as easily as the others have been. This matter of the leukocyte count of 44,200 is of interest. It came on, coincidentally, at least, with the abscess in the thigh. I would like to point out that on the first leukocyte count of 2,650 there were 75 per cent lymphocytes, which might indicate the possibility of a lymphatic leukemia. The 75 per cent lymphocytes mean that his actual lymphocyte count was only about 1,900. At the time when his leukocyte count was 44,200, the lymphocyte percentage had dropped to 9, that drop occurring in a period of 10 days. The 9 per cent of lymphocytes, with a total count of 44,200, represents something over 3,700 lymphocytes, so that his lymphocyte

count was actually doubled, going from 2,000 up to 4,000. This leukocytosis of 44,000 is, I think, of significance, because it is essentially an unexplained leukocytosis. Incidentally, a count which is not recorded on the protocol showed 50 per cent band polymorphonuclears in the smear and some 30 per cent segmented polymorphonuclears, so that there was a high neutrophil count at that time.

I think, then, that one has to consider the possibility of this being a leukemia. He started with 75 per cent lymphocytes, but there is no record of there being a lymphadenopathy at any time during the course of his hospital stay. The spleen was not palpable. We examined the bone marrow on several occasions and did not find any evidence of a lymphocytic infiltration of the bone marrow. It does not look like a lymphatic type of leukemia. The next possibility would be a myeloid type, which would be suggested by this leukocyte count of 44,200 with 50 per cent band polymorphonuclears. There was no splenic enlargement, and, again, the examination of the bone marrow in this individual did not show the typical myeloid overgrowth that you would expect to find in a patient who had myeloid leukemia.

The third possibility is a monocytic leukemia. There is little in the protocol that suggests this diagnosis, as he had only 8 per cent monocytes, but still it has to be considered, because with hyperplasia of the reticulo-endothelial tissues we find that, not only are monocytes produced and liberated in the blood stream, but also, with that, the granulocytes are increased to some extent in some of the patients. If this is an aleukemic leukemia, then one assumes that the bleeding and hemorrhagic manifestations were on the basis of a secondary thrombocytopenic purpura. The platelets were low, he had the bleeding tendencies and purpuric spots, and he certainly was bleeding from the gastrointestinal tract, and we believe that this was a secondary thrombocytopenic purpura, probably secondary to an aleukemic leukemia. From the last blood smear that was examined in the hematology laboratory, a note was made that the smear was compatible with a diagnosis of monocytic leukemia, but that we could not exclude the possibility of its being an atypical form of the myeloid leukemia.

Clinical Diagnosis

Monocytic aleukemic leukemia.

Dr. S. Forbes (Radiology): This patient had a high transverse stomach that is difficult to examine. The duodenal bulb often lies transverse posteriorly, and the examination is many times a difficult one. At the fluoroscopic examination

we were able to turn the patient in various positions to bring out the best visibility of the stomach and duodenum. We felt at the completion of the examination that the patient did not have a lesion in either. He was examined again three weeks later and in looking over the films we saw nothing to suggest an ulcer in the stomach or duodenum.

Dr. M. Soley (Dean, College of Medicine): Dr. Carter, I think if one did not know the hematologic findings from the laboratory, which are not included here, that one would certainly have to think of a myelophthisic type of anemia, secondary to carcinoma of the prostate. I had one case that was a parallel to this one in all of its findings, and it was passed by because of the benign hypertrophy. The carcinoma was very small.

Dr. J. Carter (Pathology): Yes, I think that is very true. I haven't seen a carcinoma of the prostate do that, but I have seen several carcinomas of the stomach produce that type of picture, too.

Dr. W. Bean (Internal Medicine): Do you think the consideration of hypersplenism could be advocated here? Do you think there is such a thing?

Dr. Fowler: Yes.

Necropsy Findings

At autopsy, on the posterior lateral wall of the duodenum just distal to the pylorus, a chronic ulcer, 2 cm. in diameter, was found. An inverted cone thrombus was present in the center of the ulcer. The entire bowel distal to the ulcer was filled with dark blood and fecal material. There was a small chronic gastric ulcer proximal to the pylorus on the posterior wall. Several small diverticula were found in the colon.

The bone marrow and lymph nodes, and to a much lesser extent the spleen, showed rather pronounced reticulohistiocytic hyperplasia. Qualitatively, there was an abnormal maturation of the cells of this system in that plasma cells and atypical mononuclear cells, seemingly destined to become monocytes, were increased. Phagocytosis of red blood cells by macrophages was conspicuous in the sinusoids of the lymph nodes. Erythroid hypoplasia and myeloid hyperplasia were noted in the bone marrow. This process is generally known as diffuse systemic reticulo-endotheliosis, or pre-leukemic or aleukemic monocytic leukemia. It appears to represent a transition between hyperplasia and neoplasia of the reticulohistiocytic system, manifested both functionally and anatomically. Such a process is frequently associated with a pancytopenia, as in this case.

The spinal cord showed no evidence of either progressive muscular atrophy or any other abnormality. There was generalized arteriosclerosis with severe coronary sclerosis and myocardial fibrosis.

The cause of death was intestinal hemorrhage from the duodenal ulcer.

Necropsy Diagnoses

Chronic duodenal ulcer with massive intestinal hemorrhage.

Chronic gastric ulcer.

Diffuse systemic reticulo-endotheliosis.

Generalized arteriosclerosis.

Coronary sclerosis, severe.

Myocardial fibrosis.

Esophageal erosion, acute.

Infarcts, spleen.

Diverticulosis, sigmoid colon.

Dr. J. Carter: At the time of autopsy, on the posterior and lateral wall of the duodenum, we did find a very large ulcer, just distal to the pylorus. This ulcer was a deeply eroding one which extended through the mucosa, the submucosa, the muscularis, and practically through the serosa. Had the patient lived a little bit longer, it appeared as though the ulcer would have perforated. Covering the base of the ulcer was a good deal of thrombotic material, which when scraped away revealed a rather large vessel which showed an inverted thrombus. The entire intestinal tract distal to this ulcer was filled with blood and fecal material, so that the immediate cause of death certainly seemed to be a massive intestinal hemorrhage. There was a smaller ulcer proximal to the pylorus also along the posterior lateral wall, but this was quite small, measuring only about $\frac{1}{2}$ cm. in diameter and only involving the mucosa and superficial portions of the submucosa. I'd like to call attention to a statement made in the summary of the necropsy findings to the effect that the spinal cord showed no progressive evidence of muscular atrophy or any other specific abnormality. This is not a correct statement. It was at the time this protocol was made, but thanks to the kindness of Dr. Sahs' technician, Mrs. Kline, we have, or had at our disposal yesterday, numerous sections at various levels which definitely show changes. These changes consisted principally of mild degrees of demyelination, particularly of the dorsal routes, to a lesser extent of the posterior columns, and also of various segments of the cauda equina. The axis cylinders were very much swollen and distorted, so that these changes fit rather nicely with the clinical findings which Dr. Fowler has mentioned and seem to adequately justify the

diagnosis made of progressive muscular atrophy, at least of a mild degree.

In the bone marrow, spleen and lymph nodes, we did find a rather striking reticulo-endothelial hyperplasia of all these structures, but particularly of the lymph nodes and bone marrow. In addition to the hyperplasia of this system, and, incidentally, it involved the endothelial component of the reticulo-endothelial system rather than the reticulum component, we also found a hyperplasia of the plasma cells and an increase in the number of atypical mononuclear cells, some of which appeared to become destined to be monocytes, although that could not be stated with any great degree of certainty. At any rate, we made the diagnosis of diffuse systemic reticulo-endotheliosis, which will be discussed a little later.

In addition to these findings there was also a generalized arteriosclerosis, coronary sclerosis of a rather severe degree, myocardial fibrosis, esophageal erosions, diverticulosis, and infarcts of the

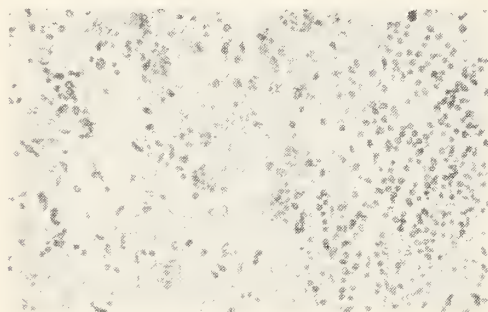


Fig. 4. Lymph Node Phagocytosis of Red Blood Cells.

spleen which were both old and recent. Also, the patient had a bleeding duodenal ulcer, a progressive muscular atrophy, and this so-called diffuse systemic reticulo-endotheliosis. There are other names by which this process goes. We prefer this particular term, since it best designates what we see. It does not necessarily mean that the process of hyperplasia of this system is the fundamental background or basis of the disease process, but, at any rate, we can see this striatum hyperplasia. Most of the cases that have been described show it to be a hyperplasia on the one hand on the part of the reticulo-endothelial system, and neoplasia on the other hand. We feel that this patient did represent that kind of a twilight or intermediate or transitional zone between hyperplasia and neoplasia. Before opening the conference to general discussion, I'd like to call on Dr. Fowler again, who will attempt to elucidate the various perplexities of this problem.

Dr. Fowler: After getting the report of this case from pathology, there are still some confus-

ing issues. In the first place, it is not clear whether the bleeding was primarily due to the duodenal ulcer or whether it was caused from the thrombocytopenic purpura. I think I would choose the latter as the predominant feature in the cause of his bleeding. He had thrombocytopenic purpura, and, if it hadn't been for the ulcer, probably he would have bled from elsewhere. I think the ulcer was more or less secondary.

I was interested in the bone marrow findings in the fixed sections which showed a hyperplasia, because, after seeing a protocol of this case, we went back over our smears from sternal aspirations and again found a hyperplasia. I think that many of the cells which we thought were of myeloid origin were probably reticulo-endothelial cells or hystiocytes. I think the hystiocytic or reticulo-endothelial proliferation was perhaps more prominent than we realized at that time, and we had misinterpreted some of those cells as being of myeloid origin. The pathologist found diffuse hyperplasia of the entire reticulo-endothelial system, involving this tissue throughout the entire body except for the spleen, and still the spleen is supposed to be one of the primary organs of the reticulo-endothelial tissues. That gets one into the question of what we mean by hypersplenism. This case, at least from a clinical standpoint, would fit with what has been described as hypersplenism, in which there is hyperplasia of the reticulo-endothelial elements in the spleen, which, because of this, and because of the phagocytic action of the reticulo-endothelial cells, would remove cells from the blood stream. In primary splenic neutropenia only the granulocytes are phagocytosed, so that a low leukocyte count ensues. When the phagocytosis is localized in the spleen, then removal of that organ is curative. In certain instances, not only are the granulocytes phagocytosed, but also the erythrocytes and platelets, so that under these circumstances one has a reduction of all of these elements in the peripheral blood stream. Doan has found that removal of the spleen in some of these patients will cure that condition also. But here we have a patient in whom the spleen was uninvolved and who showed no hyperplasia of the reticulo-endothelial elements, but the lymph nodes and reticulo-endothelial tissues elsewhere were involved. I think this probably represents the type of case in which a diagnosis of hypersplenism is not made, at removal of the spleen has not been curative, because the reticulo-endothelial tissues elsewhere in the body have been hyperactive and were doing the damage rather than the spleen itself. There are some who believe that this diagnosis should not be

made, and removal of the spleen should not be advised unless the organ is definitely enlarged. It was not enlarged in this patient.

As far as the clinical picture in this case is concerned, I think the clinician would have to call it an aleukemic leukemia, in spite of the fact that leukemia is not substantiated by the pathologic findings. They classify it as diffuse reticulo-endotheliosis. Just where one draws the line between diffuse reticulo-endotheliosis, which may come about from a number of different stimuli, and where leukemia begins is difficult to say. In monocytic leukemia, we have a condition in which there is supposedly a diffuse hyperplasia of reticulo-endothelial tissues throughout the body which is difficult to distinguish from this diffuse reticulo-endotheliosis of nonleukemic origin.

One question which I would like to raise is how frequently, in patients with monocytic leukemia, do you find this phagocytosis going on in the reticulo-endothelial tissues? Does it occur in monocytic leukemia, or is that a separate disease from reticulo-endotheliosis in which there is an extreme degree of phagocytosis of the cells? As far as I can recall in cases of monocytic leukemia that we have seen at autopsy, I do not remember that phagocytosis was a particularly prominent feature. On the other hand, in the peripheral blood of patients with monocytic leukemia, I have seen a number of instances in which the monocytes were phagocytosing cells, and I have seen a monocyte with a complete erythrocyte engulfed within its cytoplasm. Weismann believes that all leukemias are examples of reticulo-endotheliosis and, for some particular reason, that the reticulo-endothelial system will over-produce myeloblasts in one case and monoblasts in another, so that all leukemias are basically a disease of the reticulo-endothelial tissues. I feel that there are still problems to settle in regard to the relationship between monocytic leukemia, diffuse nonleukemic reticulo-endotheliosis, and hypersplenism.

Dr. Carter: Relative to the question of phagocytosis in other cases of monocytic leukemia, I think it is true that it is an inconstant finding. If one looks for it, he generally finds it to some degree, but the degree to which phagocytosis does occur varies considerably from one case to another. *Dr. Fowler* alluded to Dameshek's work, with regard to his theory in connection with the fact that the spleen presumably puts out some type of a hormone which prevents the delivery of the matured granulocytes and erythrocytes and platelets to the peripheral blood. We have not mentioned that up to this point, except for what *Dr. Fowler* mentioned. It is true that there are,

fundamentally, these two theories with respect to this whole process: one, that there is a hormone produced by the spleen which prevents the delivery of these cells to the blood that is championed principally by Dameshek and his workers; Doan and Weismann, on the other hand, favor the phagocytosis idea or concept. It is true that in the majority of cases we do find some degree of phagocytosis, but that does not necessarily mean that this hormonal theory could not also work at the same time. It is of interest, though, that this case would not fit into the pigeonhole which Dameshek, Doan, Weismann and others classify as hypersplenism, because there wasn't any enlargement of the spleen, as has been mentioned, and, furthermore, the changes in the spleen were not nearly as striking as they were in the other tissues; so that, predominantly, this change has been in the bone marrow and lymph nodes, and, qualitatively, the process seems to be one of a hyperplasia of the reticulo-endothelial system.

And as far as the nomenclature is concerned, it seems to us, examining the sections at any rate, that it was rather immaterial just what you call it. The reason why most pathologists don't call it an aleukemic monocytic leukemia is because in fixed tissue sections no one can dogmatically say that such and such a cell is a monocyte. They can say it is a mononuclear cell, probably one which will become a monocyte, but no one can dogmatically state that it is one *per se*. We can do that with smears, but not in fixed tissue preparations, and that is fundamentally the reason why most pathologists shy away from that name. But as far as the disease process itself is concerned, it seems to be fundamentally the same thing.

Dr. Albright (Iowa City): What is the relation of this to Letterer-Siwe disease?

Dr. Carter: Well, it is in some respects related probably. In a sense, it is thought by most people who have studied these diseases that Letterer-Siwe is a disease of the reticulo-endothelial system the same as this. But in Letterer-Siwe's disease we have an age group a little bit different, and there are other differences. It does represent the most malignant type of the hyperplastic diseases and is related to some extent to this diffuse reticulo-endothelial hyperplasia. But, histologically, there are certain functional differences, for example, in Letterer-Siwe's disease we rarely find a marked phagocytosis of the white or the red blood cell elements. Rather, we find a lot of lipid-filled macrophages, which still stem from that same system. It is hard to compare them. There certainly is some connection, but just what it is isn't established.

Dr. Fowler: Would you care to comment on the relationship of this to plasma cell leukemia, and the finding of many plasma cells in this patient.

Dr. Carter: Well, there were lots of plasma cells in this particular case, and many people, including Weismann, feel that the plasma cell does stem from the reticulo-endothelial cells, just as the monocytes and the myeloid elements do. In some forms of plasma cell tumors and multiple myelomas, we do find mixed plasma cells. As a matter of fact, most of the books on hematology still state that there are five or more different types of multiple myeloma. For example, if you have the concept that perhaps all of these myeloid, plasma cells, and erythroid elements stem from the primitive reticulo-endothelial system, then it is perfectly logical that you would get mixtures with myeloid elements and plasma cells, etc. I think it is a possibility and that perhaps this case might have gone on to a diffuse myelosis. There have been cases reported in the literature, particularly by Gaston in France, of the so-called diffuse myelomatosis, and by some of the Scandinavian writers, who certainly believe that the picture of multiple myeloma can be a diffuse one, one in which the plasma cells stem from within the reticulo-endothelial cells, but I think those are theories and opinions not based on experimental observation. But, at least, it is an idea that that is what happens. Certainly in this case the presence of large numbers of plasma cells is unequivocal. They are beautiful ones. Dr. Sahs, did you find a decrease in the horn cells?

Dr. A. Sahs (Neurology): This disorder was described by Charcot-Marie in the 1880's and later by Tooth, and it is commonly known as Charcot-Marie-Tooth peroneal muscular atrophy. As such, it is not a typical muscular atrophy that will ordinarily start with the wasting of hands, and sometimes of the legs, and result in secondary changes in the nerves and muscles. The typical progressive muscular atrophy will be a disease of the horn cells and for that reason is sometimes known as a chronic poliomyelitis, which is a misnomer. This is slightly different. This disorder typically takes place in elderly individuals and is characterized by wasting of muscles, particularly the peroneal groups, so that the individual ultimately develops so-called "stork legs." Other changes are present in the upper extremities as well. The bulk of the pathologic findings are in the nerves themselves, although other changes may be present and have been reported in the spinal cord of these people. This is a muscular atrophy, but it falls into a slightly different group

than the so-called typical progressive muscular atrophy.

Dr. J. Layton (Pathology): Dr. Carter, would you care to comment on the relation of the infection that this patient had to the reticulo-endothelial hyperplasia seen at autopsy.

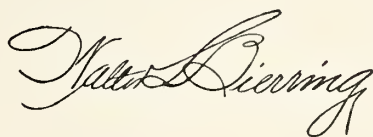
Dr. Carter: Yes. Someone might wonder if this diffuse reticulo-endothelial hyperplasia might have been due to a localized infection. From all the evidence that can be gleaned from studies of sections and cases of this sort in the literature, that is generally not true. Obviously, everyone knows that when you have an infection the lymph nodes undergo hyperplasia of the lymphoid elements or the reticulo-endothelial elements, but rarely does it ever involve the entire body, unless the body happens to be riddled with a diffuse disease process. For example, in sarcoidosis and certain types of actinomycosis and tuberculosis you usually do get a diffuse systemic reticulo-endotheliosis and a generalized hyperplasia, which is somewhat analogous to this process here, but without the abnormal maturation that is present in this case. But, with regard to a localized infection, the lymph nodes in the neck, for example, would be appreciably enlarged if an individual had infection in the thigh, as this individual did. In other words, it remains a localized infection, and the lymph nodes in the area draining that area would undergo hyperplasia. But you would not necessarily expect to find the abnormal maturation and development of the cells as in this particular case.

SCHOOL HEALTH SERVICE SURVEY

The American Medical Association, in cooperation with the U. S. Office of Education, is making a study of school health services through its Bureau of Health Education. The survey is a preliminary step in efforts designed to bring about improvement of school health programs within the framework of the private practice of medicine. In regard to this, the secretary of each county medical society will receive in the mail a questionnaire on school health services in his community. It is most important that each county medical society complete and return the questionnaire.

Concurrently, the U. S. Office of Education in Washington will query the schools. Two different questionnaires, which supplement and reinforce each other without duplication, are being used. The information requested is needed to determine present strengths and weaknesses in school health services, indicate needs, and point up action for the future. The questionnaire has been tested prior to printing, and all unnecessary questions eliminated.

STATE DEPARTMENT OF HEALTH



RABIES IN ANIMALS

The number of rabies cases reported in animals continues to increase, and new counties are being added to the list as the disease makes its appearance in more communities of the state. To date, May 14, 44 counties have reported 123 cases—28 more cases than the total for the entire year of 1948. Thirteen cases have been reported for the week ending May 14, the highest reporting for any one week of the year.

Polk county and Des Moines lifted their 60 day quarantine April 17. Five cases, 2 in April and 3 in May, have been reported since the quarantine ended. This either indicates that the quarantine period, which was not carried out through the 60 day period, was too short or that too many families turned their dogs loose at night when police squads were off duty.

Several cities and towns, as well as two counties (Webster and Hancock), now have quarantine regulations in effect.

Since April 14 when the last summary showed rabies in 35 counties, 9 new counties have been added to the list:

Cedar	Jasper
Clayton	Taylor
Davis	Union
Hamilton	Washington
Humboldt	

The total number of cases by months is as follows:

January	13
February	27
March	25
April	39
May	19 (through May 14)
Total	123 (May 14, 1949)

DIVISION OF PREVENTABLE DISEASES POLIOMYELITIS

On May 5 the Public Health Service released the following summary regarding the seasonal incidence of poliomyelitis.

"A three-week moving average of the number of cases of poliomyelitis being reported each week suggests that the low point in incidence of this

disease was reached this year in the week ending April 9. In the current week (ending April 30), the number of cases reported was greater than last year at the same time and more than twice as high as the 1944-1948 median figure for the week. Since the week ending March 19 (which is the week that in the average experience or previous years has shown the lowest incidence in the seasonal cycle for this disease), there have been 293 cases reported from various parts of the country. This is 37 per cent above the number for the same 6 weeks of 1948. Comparing these six-week totals, region by region, with the data for recent years, it is seen that the current preseasonal excess is in the southern and western parts of the country. The south Atlantic, west south central mountain, and Pacific states have reported larger numbers than in the same period of any of the preceding four years, while in the east south central states the figure is the largest since 1945. In other areas the number of cases is not much different from those for the years 1945-1948.

"The influence of improved reporting of out-of-season cases is an unknown but possibly important factor in the current excesses."

Iowa's cases for 1949 have been distributed as follows:

January	8
February	3
March	1
April	7
May	0 (through May 14)

The 7 cases reported in April occurred in 6 counties and were well scattered over the state. This, together with the absence of cases in Iowa for the first half of May, forecasts a low poliomyelitis incidence for the coming year. By June 1 last year 33 cases had been reported, with 15 of them listed with onset in May.

IOWA PUBLIC HEALTH ASSOCIATION TO MEET

The Iowa Public Health Association is an organization made up of individuals who devote

either full or part time to public health activities in their employment or in volunteer groups.

One of the highlight meetings of the year in the field of public health will be held at the Savery Hotel June 2 and 3, when the Iowa Public Health Association convenes to spend two days seriously considering the theme "Improving Public Health in Iowa."

President Carl Potter and Secretary-Treasurer L. E. Chancellor have informed us that an excellent program has been planned. The meeting will open at 9:30 a. m. Thursday with discussion on community health councils and channels of health publicity designed for the improvement of public health in Iowa, such as radio, health exhibits, visual aids, school health and newspapers. There will be a preview of new health films on Thursday and Friday noons. The health needs of Iowa will be described by representatives of labor, Farm Bureau, Parent-Teachers' Associations, city health groups and the State Medical Society.

On the second day current facts and methods in improving public health in Iowa will be discussed by representatives of nursing services, public health statistics, child guidance, safety and sanitation organizations. The afternoon programs will be devoted to the important topics of the merit system, dental health and nutrition.

All persons interested in improving the public health in Iowa should plan to attend.

IOWA VENEREAL DISEASE CONFERENCE

As a part of our plan of coordinating the work of venereal disease control in Iowa, we hope to initiate a series of state and district conferences to which all workers in the field may bring their

problems. The first of these meetings, a state-wide conference, is being held Wednesday, June 1, in Des Moines, the day preceding the Iowa Public Health Association meetings.

Meetings will be held at Broadlawns Hospital in Des Moines, and those attending should come at 9 o'clock to the central entrance of the Tuberculosis Hospital at Broadlawns.

During the morning meeting beginning at 9 o'clock, Miss Virginia Murphy, venereal disease consultant nurse of the U. S. Public Health Service, will discuss "The Role of the Public Health Nurse in Venereal Disease Control." Time will be given Miss Murphy to answer questions from members of the group.

At the afternoon meeting, beginning at 1 o'clock, Dr. Leo Pearlman, director of the Rapid Treatment Clinic at Broadlawns Hospital, will present a group of his clinic cases. Discussion of these cases will be presented by Dr. R. G. Carney or Dr. Thomas R. McGowan of the Rapid Treatment Clinic at the University Hospital at Iowa City. Dr. I. H. Borts, director of the State Hygienic Laboratories, Iowa City, will continue the session with a discussion of "The Laboratory Problems of Sero-Diagnosis of Syphilis." The meeting will conclude with a discussion of "The Administrative Problems of Venereal Disease Control" by a physician from the staff of the Division of Venereal Disease Control of the U. S. Public Health Service.

Lunch will be served in the cafeteria at Broadlawns at 11:30. In order that the hospital may know how many to serve, it will be necessary to sign and return the luncheon reservation card. If you do not receive such a card, send a note, to reach us by Monday, May 30, saying you will be here for lunch.

MORBIDITY REPORT

DISEASE	April '49	March '49	April '48	Most Cases Reported From:
Diphtheria	3	3	0	Polk (2), Cerro Gordo 1
Scarlet Fever	83	103	123	Black Hawk, Buena Vista, Polk, Wash. Cass
Typhoid Fever	1	1	1	
Smallpox	0	0	0	
Measles	393	158	1,938	Cerro Gordo, Clinton, Des Moines
Whooping Cough	15	14	38	Clinton, Scott
Brucellosis	37	18	9	Scattered
Chickenpox	515	471	465	Black Hawk, Dubuque, Polk, Story
German Measles	75	13	5	Buena Vista, Clinton, Des Moines, Polk
Influenza	0	1	1	
Meningitis, Men.	3	2	6	Cerro Gordo, Clinton, Van Buren
Mumps	600	718	477	Black Hawk, Dubuque, Scott, Story
Pneumonia	13	7	14	Black Hawk, Polk, Story
Poliomyelitis	8	0	6	Cases scattered, Dubuque 2, other counties 1
Rabies in Animals	39	25		Iowa, Johnson, Polk, Warren
Tuberculosis	108	66	73	For the state
Gonorrhea	67	75	71	For the state
Syphilis	221	190	90	For the state

The JOURNAL of the Iowa State Medical Society

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Iowa Third in Collection of Assessment

Word from AMA headquarters reveals that Iowa ranks third in the collection of the \$25 assessment for the American Medical Association. Arizona is first with 80 per cent; Hawaii second with 75 per cent; and Iowa next with 73 per cent. It is gratifying, of course, that our society is up toward the top, but we hope to bring our final figure much higher by the first of July. Certainly there is no good reason why Iowa should not equal any other state in paying this assessment. We have insisted for the past eight years that the American Medical Association should do its own educational work rather than delegate it to outside organizations, and now that our national association is functioning in this direction, it should have our 100 per cent cooperation.

Results of the educational campaign have already become evident. The General Federation of Women's Clubs with five million members went on record the last of April as favoring voluntary as opposed to compulsory insurance; many local organizations and service clubs have done likewise. A growing number of letters have been mailed to the Congressmen in Washington expressing opposition to compulsory health insurance. All of this is having its effect and will lessen the danger of the enactment of unfavorable legislation this year.

Whitaker and Baxter, the public relations counsel for the educational campaign, has been working as fast as possible on the preparation of pamphlets for distribution to various groups. The three latest received from them are WB14, a 24

page pamphlet setting forth factually what is involved in such legislation entitled "Compulsory Health Insurance"; WB1, "The Voluntary Way Is the American Way," a 16 page pamphlet of 50 questions on compulsory as opposed to voluntary insurance; and WB2, a long folder bearing Sir Luke Fildes' picture "The Doctor" and containing questions and answers, the answers showing the difference between compulsory and voluntary methods. All three of these pamphlets are excellent and should be a great aid to persons wishing to talk on the subject. They are very readable, and so are good for distribution to different groups, and they also contain a great deal of information in "capsule" form, which makes them handy reference sources.

Supplies of all of these are being sent to the central office and may be obtained there. Samples of WB14 have been mailed to the county society secretaries and delegates already; samples of the others will be mailed as soon as supplies are received.

Many doctors have sent in the names of persons who are willing to talk on the issue in their communities. This is the type of effort which will bring about the result we want—education of the people to what compulsory health insurance really means. When the public really understands what is involved in such legislation, when it knows the cost, when it realizes inferior medical service has invariably accompanied such legislation in other countries, the great majority will vote overwhelmingly for the voluntary method. As we educate more and more people to the principles involved, we make more and more progress toward the objective set out by Whitaker and Baxter in February—a permanent stop to the agitation for such legislation.

National Physicians Committee Dissolving

Word was received in April that the National Physicians Committee was going to discontinue operations and that no donations would be accepted after April 1. Money forwarded by the State Society after that date was returned to the individual doctors; distribution of previous donations is to be determined at the time of the American Medical Association meeting in Atlantic City in June.

While we cannot speak authoritatively on the dissolution, it seems reasonable that, with the American Medical Association conducting an aggressive educational program, the need for the work of the N.P.C. diminished, and it was felt advisable to channel all efforts through the one medium.

This seems like a wise decision. With one board of directors in charge of the program instead of two, there should be no going off at tangents but, instead, a clear-cut policy and coordination of effort.

WHO Program for 1950

Representatives of some 70 nations will gather in Rome on June 13 for the second World Health Assembly. Consideration of a document reviewing in detail the world's most urgent health problems will be the major item on the agenda. The first of its kind in history, this document was examined and approved by the WHO Executive Board last month.

The program offers a new approach to the health problems of the under-developed regions of the world by means of "Health Demonstration Areas," which are to be set up where the populations are infested with eradicable diseases. Individual projects will be undertaken on malaria, venereal diseases, tuberculosis, cholera, typhus fever and plague. Often, more than one major disease problem can be attacked simultaneously.

At the same time, long-term campaigns to promote positive health are to be launched. Modern technics of maternal and child welfare, occupational hygiene, mental health, environmental sanitation and similar measures will be introduced into the areas, along with the further health education of the public, training of doctors and nurses, stimulating and improving public health administration, and raising levels of nutrition. Also, fellowships are to be granted to medical and health workers from neighboring areas where similar conditions exist, who will thus be able to carry the knowledge gained back to their own regions for application on the health problems there.

It is difficult for us in Iowa to appreciate the devastating nature of these diseases which cripple so much of the world; for example, the tuberculosis death rate per 100,000 population in North American is 42, but in Asia rises to an estimated 260-360. Where these conditions exist, the creative strength of the entire population is undermined. This ambitious program, undertaken through the cooperation of 70 nations, can release this energy from the stifling effect of disease and inferior health, which may well stimulate social and economic developments that, in this more closely knit world, will prove a benefit to all. It is for the representatives of the peoples of the world, at the Health Assembly in June, to determine whether these plans for carrying forth humanity's offensive against disease, ill health, ignorance, and poverty shall be put into effect.

Care of Surface Injuries of the Hand

The American Society for Surgery of the Hand has prepared recommendations dealing with the care of surface injuries of the hand. All treatment of injuries such as burns, abrasions and avulsions which may cause destruction and denudation of any area of the skin of the hand is aimed at protection from infection, the early restoration of skin covering, and the avoidance of disabling scarring and contractures.

A first-aid sterile dressing, completely covering the hand and bandaged firmly, should be applied immediately following a heat burn or abrasion, and, in the case of chemical burns, after the injuring agent has been washed away by profuse irrigation with warm water.

The definitive treatment is carried on in an operating room under conditions of strict asepsis. The first-aid dressing should be removed gently, soaking loose with normal saline solution if necessary. The injured surface is cleansed by light sponging with saline on cotton balls. If the surface is dirty or greasy, it may be gently washed with sterile neutral soap in sterile water or a bland detergent. Loose fragments and tags of skin are removed. Blisters are not opened. Sterile strips of fine-mesh vaseline-impregnated gauze are smoothly applied and covered with dry sterile gauze, separating adjacent fingers. The whole hand is covered with a thick layer of sterile mechanic's waste or fluff gauze and splinted in the position of function. Elastic knit bandage is applied over all, including all fingers, with firm even pressure. The hand is kept elevated.

The original dressing is left undisturbed for 12-14 days unless elevation of temperature suggests active infection requiring inspection. Preparations for skin grafting should be made in advance. After removing the dressing under the same aseptic conditions, slough and debris are washed away by irrigation with normal saline solution (no scrubbing of surface). Granulating areas from which slough has separated should be covered with thin split-thickness skin grafts. A dressing similar to the first is applied and the hand once more splinted in position of function.

Further dressings, similarly conducted, are done at intervals of seven days until epithelization of burned surface is complete. Skin coverage by grafting should be secured as rapidly as possible as the best assurance against infection, inflammation, infiltration, scarring and contractures. This early coverage by "skin dressing" is of the greatest importance, even when epithelization from the margins is proceeding satisfactorily. Split-thickness grafts are best for this purpose, even though

it is anticipated that some of the grafted area must later be removed for replacement by more suitable skin.

As soon as epithelization of burned surfaces is complete, directed active use and exercise of the hand is begun. Normal use of the hand is encouraged and voluntary exercise and appropriate occupational therapy prescribed.

Licensure of Foreign Medical Graduates

A problem of increasing importance, and one that promises to become an even greater one, is that of the licensure of physicians who have received their medical degrees from foreign institutions. Many state licensing boards have been reluctant to admit foreign-trained physicians to examinations, having long ago recognized the limitations of licensure examinations in determining whether a physician is adequately prepared to practice medicine. Of equal importance, at least, is the evaluation of the medical school from which the physician is graduated. For this reason, the various boards have depended upon the findings of periodic surveys of medical schools carried out by the Council on Medical Education and Hospitals of the A.M.A. and the Association of American Medical Colleges. However, it has been beyond the resources of these two accrediting boards to survey and appraise the 300 or more medical schools in other parts of the world, and they have confined themselves by necessity to the some 60 medical schools in the United States and Canada.

For many years it was not important due to the small number of physicians seeking to practice in the United States who, for the most part, were from well known medical schools. Since 1930, however, unsettled economic and political conditions abroad as well as war have entirely changed this picture. Medical education in other countries, with few exceptions, has deteriorated to a shocking degree in schools which once maintained standards equal with those in the United States; there is little hope that they will be able to raise their standards in the near future. Moreover, due to these unfavorable conditions abroad, an ever-increasing number of physicians are seeking to enter this country and to practice medicine here. Their exclusion from the United States cannot be reconciled with our principles, but until more information can be obtained about the foreign medical schools the licensing boards would fail in their public responsibility if they did not use the greatest discretion in admitting these physicians to their examinations.

A commendable report on this problem was published in the April 16 issue of the *Journal of the A.M.A.* by an unofficial committee sponsored by the Council on Medical Education and Hospitals and composed of representatives of some 20 organizations. This committee recommends that all the various agencies concerned unite their resources in order to secure reliable information and appraisal of foreign medical schools. When this information is available, it will enable licensing boards to admit the graduates of acceptable foreign medical schools, provided, of course, that they fulfill all of the other requirements.

UNIVERSITY ENT CLINIC REMODELED

According to the *Daily Iowan*, Thursday, May 5, 1949, the ear, nose and throat clinic of University Hospitals now looks like an interior decorator's reception office with cheerful and attractive color combinations in the waiting, examination and office rooms.

The "new look" in the department is part of the redecorating, partitioning of rooms and installation of modern equipment, which will provide "greater efficiency from available space" when completed, University Hospitals officials pointed out.

The idea is to put excitement and atmosphere in the walls, now richly painted with combinations of Swedish red, coral, moonbeam blue, chartreuse, smoky gray, jonquil yellow, ocean gray green, ply-mouth gray and other colors.

Enhancing the rooms' appearance is birch veneer paneling with the same wood used for the sliding doors and cabinets. The latest fixtures in fluorescent lighting were installed, and radiators were painted silver.

Latest medical equipment, replacing the obsolete and 20-year-old equipment, adds to the modernistic appearance of the department, now located on a single floor.

Examination tables, operated by electric-hydraulic power, inter-office telephone communication system, telescopic lighting fixtures and a Ritter ear, nose and throat chair and unit are among the new installations.

Partitioning of the room, included in the alteration, has created nearly twice as many examining rooms as there formerly were.

RADIO PROGRAM ON SOCIALIZED MEDICINE

On Monday evening, April 11, at 8:30 o'clock over radio station KXEL a program entitled "Pills and Politics" had its beginning. This program, sponsored by the Black Hawk County Medical Society through the courtesy and generous assistance of KXEL, is designed to acquaint the public with the dangers of socialized medicine. These programs will, for the most part, be delivered by the laity for reasons quite obvious.

SUI POSTGRADUATE COURSE CONFERENCE IN INTERNAL MEDICINE

The State University of Iowa College of Medicine Postgraduate Course Conference in Internal Medicine will be held at the University Hospitals, Iowa City, on June 13 to 17, 1949.

Several distinguished guest lecturers will be present: Dr. Morton Hamburger, Associate Professor of Medicine of the University of Cincinnati College of Medicine, will speak on "The Mechanism of the Action of Antibiotics" and "The Spread of Infectious Diseases from the Respiratory Passages." Dr. Edgar A. Hines, Jr., Associate Professor of Medicine of the Mayo Foundation Graduate School, University of Minnesota, will discuss "Diseases of the Peripheral Vascular System" and participate in a "Symposium on Hypertension." Dr. Paul E. Houston, Associate Professor of Psychiatry at the University of Iowa College of Medicine, and other members of the staff of the Department of Internal Medicine will also take part in this Symposium. Dr. Franklin D. Johnston, Associate Professor of Medicine at the University of Michigan College of Medicine, will discuss "The Recognition and Treatment of Common Disturbances of Cardiac Mechanism" and will present an illustrative discussion of the "Common Errors in Electrocardiographic Interpretation." Dr. E. D. Warner, Professor and Head of the Department of Pathology at the University of Iowa College of Medicine, will moderate a Clinical Pathological Conference.

In addition, Dr. W. B. Bean, Professor and Head of the Department of Internal Medicine at the State University of Iowa, will discuss "Vitamins Facts and Fads" and "Vascular Changes in the Skin in Liver Diseases." Dr. Elmer L. DeGowin, Associate Professor of Internal Medicine, will present a review of "Water and Electrolyte Balance." Dr. W. M. Fowler, Professor of Internal Medicine, will participate in "The Cardiac and Therapeutics Clinics." Dr. Robert C. Hardin, Assistant Professor of Internal Medicine, will consider the "Clinical Aspects of Diabetes Mellitus." Along with Dr. Kate Daum, Director of Nutrition and Associate Professor in the Department of Internal Medicine, Dr. Hardin will conduct Diabetic Rounds. Dr. Lewis E. January, Assistant Professor of Internal Medicine, will discuss the "Management of Cardiac Failure." Dr. William D. Paul, Associate Professor of Internal Medicine, will present "Therapeutic Implications of Ulcerative Colitis." Dr. Mayo H. Soley, Dean of the College of Medicine and Professor of Internal Medicine, will moderate a Clinic on the Management of Patients with Thyroid Disease and consider "The Place of Iodine in the Treatment of Thyroid Disease."

All the participants in the conference will participate in a round-table discussion at the end of each day for the exchange of ideas. Attendance is limited to 25 and applications will be accepted in the order they are received when accompanied by the fee of \$50.00. Checks should be made payable to the

State University of Iowa and mailed with your application to the Director of Medical Postgraduate Studies, Room 259, Medical Laboratory Building.

CONFERENCE OF PRESIDENTS AND OTHER OFFICERS OF STATE MEDICAL ASSOCIATIONS

Compulsory health insurance plans will dominate the discussion at the Fifth Annual Meeting of the Conference of Presidents and Other Officers of State Medical Associations, to be held at Atlantic City on Sunday afternoon, June 5, the day preceding the opening of the A.M.A. general sessions.

Cecil Palmer, English publisher, author and journalist, now completing a tour of America for the British Society for Individual Freedom, will describe the impact of socialized medicine on the British doctor and his patients. An American viewpoint of the British health system will be given by W. Alan Richardson, editor of *Medical Economics*, who is now in England studying all phases of the program.

With compulsory disability compensation programs operating in three states, the conference presents two speakers on this vital question. Edward H. O'Connor, managing director of the Insurance Economics Society of America, will discuss the legislation, and Dr. Bert S. Thomas, medical director of the California program, will tell of the medical implications of cash sickness compensation acts.

The A.M.A. relationship to the state societies will be reviewed by Dr. George F. Lull, secretary of the A.M.A., and the problems facing the state association at crossroads will be the subject of an address by Dr. Clarence Northcutt, president of the Oklahoma State Medical Association. Plans are also pending for the presentation of views on national health legislation by a member of Congress.

CONFERENCE OF COUNTY MEDICAL SOCIETY OFFICERS

The Fifth National Conference of County Medical Society Officers (Grass Roots Conference) will be held in Atlantic City, Sunday, June 5, with sessions in the morning and evening, so that this conference will not conflict with the Conference of Presidents to be held in the afternoon.

The morning session will be devoted to specific county medical society problems, with three panel discussions on (1) The Problem of Emergency Calls, (2) Indigent Medical Care Plans, and (3) The National Education Campaign. The last hour of the morning session will be given over to questions on the National Education Campaign, with Mr. Whitaker and Miss Baxter present to provide the answers.

The evening session will be open to all physicians and their wives and will feature talks by Mr. Clem Whitaker, speaking on the "A.M.A. National Education Campaign"; and the Honorable John L. McClellan, U. S. Senator from Arkansas, on the topic, "A Congressman Views the Health Problem."

IOWA SOCIETY OF MEDICAL TECHNOLOGY

announces the
Program for Refresher Course
sponsored and prepared by the

COLLEGE OF MEDICINE, STATE UNIVERSITY OF IOWA

Medical Laboratories
Iowa City, Iowa

Wednesday, June 22
Registration 8:30-9:15

(East Entrance of Medical Laboratories)

Morning Lectures 9:15-12:00 a. m.

I. H. Borts, M.D., Presiding

Introduction

Dean Mayo H. Soley, M.D., College of Medicine
Blood Bank Procedures in a Medium Sized Hospital
E. L. DeGowin, M.D., Department of Internal
Medicine

Hematology

W. M. Fowler, M.D., Department of Internal
Medicine

Afternoon Lectures 1:15-3:00 p. m.

J. R. Porter, M.D., Presiding

Rh—A Review of Newer Knowledge

E. L. DeGowin, M.D., Department of Internal
Medicine

Serology—A Discussion of Newer Developments

I. H. Borts, M.D., State Hygienic Laboratory

Afternoon Tours and Demonstrations 3:30-5:00 p. m.

State Hygienic Laboratory

Blood Bank Tour

Hematology Demonstrations

Robert Hardin, M.D.,
Department of In-
ternal Medicine

Thursday, June 23

Morning Lectures 9:00-12:00 a. m.

I. H. Borts, M.D., Presiding

Chemistry—Principles of Colorimetry and Recent
Advances in Laboratory Techniques

R. B. Gibson, M.D., Department of Biochemistry
Chemistry—Changes in Blood Constituents With
Age and Disease

Genevieve Stearns, M.D., Department of Pediatrics
Chemistry—Quantitative Urinalyses Useful in Diag-
nosis or Prognosis

Elizabeth Knapp, M.D., Department of Pediatrics
Afternoon Lectures 1:15-3:00 p. m.

J. R. Porter, M.D., Presiding

Parasitology—Review of Parasites and Newer Meth-
ods in Parasitology

Kenneth MacDonald, M.D., Department of
Hygiene and Preventive Medicine

Bacteriology and Mycology—A Review of the Newer
Diagnostic Methods

A. P. McKee, M.D., Department of Bacteriology
Afternoon Tours and Demonstrations 3:15-5:00 p. m.

Pathological Chemistry Laboratory

Children's Hospital Chemistry Laboratory

Parasitology Laboratory

Bacteriology Laboratory

NEWS NOTES

From the Committee on Medical Service
and Public Relations

The Committee on Medical Service and Public Relations wants to stress again the need for county societies to form Speakers Bureaus of lay people to discuss the merits of voluntary insurance as compared to compulsory health insurance. Many societies have advised the committee of this action, and a few have reported that speakers are available and working. The state office has received a source of material from the American Medical Association campaign headquarters, which is available to every physician. We want to encourage all physicians to have these pamphlets in their reception room for the patients to read and pass on to their friends. If you do not have a supply on hand, please write the Iowa State Medical Society office and they will be supplied. It is felt that by filling requests rather than just mailing the pamphlets direct it will save a lot of waste; if you can use any material, please notify the state office.

From all indications the educational program of the American Medical Association is beginning to hit its stride, and in order to obtain maximum results the full cooperation of every physician is needed. Every patient should be encouraged to write his congressman denouncing Truman's health program. Many physicians are placing postcards in their reception room for this purpose. The problem isn't how it is done, but whether or not *it is done*.

Many county societies are conducting excellent radio programs on voluntary insurance as opposed to compulsory health insurance, and in most cases the broadcasts are on public service time so there is no cost involved. One of the outstanding programs to date is that sponsored by the Black Hawk County Medical Society, "Pills and Politics," which is broadcast each Monday evening at 8:30 p. m., over radio station KXEL. Many subjects have been discussed on these programs, but they all reflect on compulsory health insurance. Some of the other county societies that have had programs or that plan to have them are: Cerro Gordo, Linn, Scott, Marshall, Johnson, Story, and there may be others the committee has not heard about.

The Committee on Medical Service and Public Relations welcomes suggestions from any and all doctors as to how we can make the activities of this committee more effective.

COUNTY MEDICAL SOCIETY OFFICERS

COUNTY	PRESIDENT	SECRETARY	DEPUTY COUNCILOR
Adair.....	Ralph DeCicco, Greenfield.....	A. S. Bowers, Orient.....	A. S. Bowers, Orient
Adams.....	C. L. Bain, Corning.....	J. C. Nolan, Corning.....	A. W. Brunk, Prescott
Allamakee.....	J. W. Myers, Postville.....	C. R. Rominger, Waukon.....	W. Thornton, Lansing
Appanoose.....	R. R. Edwards, Centerville.....	E. F. Ritter, Centerville.....	E. A. Larsen, Centerville
Audubon.....	L. E. Jensen, Audubon.....	H. K. Merselis, Audubon.....	L. E. Jensen, Audubon
Benton.....	G. R. Woodhouse, Vinton.....	L. W. Koontz, Vinton.....	N. B. Williams, Belle Plaine
Black Hawk.....	D. W. Bickley, Waterloo.....	F. G. Loomis, Waterloo.....	A. J. Joynt, Waterloo
Boone.....	R. L. Wicks, Boone.....	H. C. Scharnweber, Boone.....	J. Q. Ganoe, Ogden
Bremer.....	O. C. Hardwig, Waverly.....	W. C. Wildberger, Waverly.....	F. R. Sparks, Waverly
Buchanan.....	J. F. Loeck, Independence.....	R. L. Knipfer, Jesup.....	J. W. Barrett, Jr., Independence
Buena Vista.....	T. R. Campbell, Sioux Rapids.....	R. E. Mailliard, Storm Lake.....	H. E. Farnsworth, Storm Lake
Butler.....	E. M. Mark, Clarksville.....	F. F. McKean, Allison.....	Bruce Ensley, Shell Rock
Calhoun.....	P. W. Van Metre, Rockwell City.....	C. E. Knouf, Lake City.....	W. W. Weber, Pomeroy
Carroll.....	V. T. Lindsay, Glidden.....	L. H. Kuker, Carroll.....	W. L. McConkie, Carroll
Cass.....	M. T. Petersen, Atlantic.....	J. F. Moriarty, Atlantic.....	
Cedar.....	Fred Montz, Lowden.....	J. E. Smith, Clarence.....	P. M. Hoffman, Tipton
Cerro Gordo.....	L. W. Swanson, Mason City.....	J. W. Lannon, Mason City.....	G. J. Sartor, Mason City
Cherokee.....	D. C. Koser, Cherokee.....	H. D. Seely, Cherokee.....	C. H. Johnson, Cherokee
Chickasaw.....	E. C. O'Connor, New Hampton.....	P. C. Richmond, New Hampton.....	P. E. Gardner, New Hampton
Clarke.....	F. S. Bowen, Woodburn.....	C. R. Harken, Osceola.....	H. E. Stroy, Osceola
Clay.....	C. C. Jones, Spencer.....	D. H. King, Spencer.....	C. C. Jones, Spencer
Clayton.....	A. R. Powell, Elkader.....	T. W. Lichter, Edgewood.....	P. R. V. Hommel, Elkader
Clinton.....	V. W. Petersen, Clinton.....	May Danielson, Clinton.....	R. F. Luse, Clinton
Crawford.....	R. A. Huber, Charter Oak.....	C. Dudley Miller, Denison.....	C. L. Sievers, Denison
Dallas-Guthrie.....	F. A. Wilke, Perry.....	C. A. Nicoll, Panora.....	
Davis.....	Richard Schoonover, Bloomfield.....	H. C. Young, Bloomfield.....	C. H. Cronk, Bloomfield
Decatur.....	F. A. Bowman, Leon.....	E. E. Gamet, Lamoni.....	F. A. Bowman, Leon
Delaware.....	Paul Stephen, Manchester.....	R. E. Clark, Manchester.....	
Des Moines.....	W. R. Lee, Burlington.....	R. D. Allen, Burlington.....	F. G. Ober, Burlington
Dickinson.....	J. J. Buchanan, Milford.....	R. F. Wolcott, Spirit Lake.....	T. L. Ward, Arnolds Park
Dubuque.....	R. P. Rusk, Dubuque.....	R. D. Storck, Dubuque.....	J. C. Painter, Dubuque
Emmet.....	J. B. Knipe, Armstrong.....	Hugo Lindholm, Armstrong.....	S. C. Kirkegard, Estherville
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Floyd.....	R. W. Stober, Charles City.....	E. V. Ayers, Charles City.....	R. A. Fox, Charles City
Franklin.....	W. R. Arthur, Hampton.....	W. W. Taylor, Sheffield.....	J. C. Powers, Hampton
Fremont.....	Ralph Lovelady, Sidney.....	A. E. Wanamaker, Hamburg.....	A. E. Wanamaker, Hamburg
Greene.....	P. E. Lohr, Churдан.....	E. D. Thompson, Jefferson.....	L. C. Nelson, Jefferson
Grundy.....	H. V. Kahler, Reinbeck.....	C. H. Bartruff, Reinbeck.....	W. O. McDowell, Grundy Center
Hamilton.....	J. L. Pateck, Webster City.....	B. F. Howar, Webster City.....	M. B. Galloway, Webster City
Hancock-Winnebag.....	D. F. Shaw, Britt.....	H. H. Perman, Forest City.....	C. V. Hamilton, Garner
Hardin.....	E. J. Steenrod, Iowa Falls.....	F. N. Cole, Iowa Falls.....	G. F. Dolmage, Buffalo Center
Harrison.....	C. W. Byrnes, Dunlap.....	Hans Hansen, Logan.....	F. N. Cole, Iowa Falls
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Ida.....	E. H. Heilman, Ida Grove.....	J. B. Dressler, Ida Grove.....	E. S. Park, Ida Grove
Iowa.....	D. F. Miller, Williamsburg.....	I. J. Sinn, Williamsburg.....	I. J. Sinn, Williamsburg
Jackson.....	J. J. Tilton, Bellevue.....	J. E. Swegart, Maquoketa.....	F. J. Swift, Maquoketa
Jasper.....	J. W. Ferguson, Newton.....	J. R. Singer, Newton.....	R. W. Wood, Newton
Jefferson.....	I. N. Crow, Fairfield.....	Robert A. Ryan, Fairfield.....	I. N. Crow, Fairfield
Johnson.....	R. T. Tidrick, Iowa City.....	R. C. Hardin, Iowa City.....	G. C. Albright, Iowa City
Jones.....	R. D. Paul, Anamosa.....	R. W. Myers, Monticello.....	T. M. Redmond, Monticello
Keokuk.....	K. L. McGuire, Keota.....	John Maxwell, What Cheer.....	D. L. Grothaus, Delta
Kossuth.....	C. H. Cretzmeier, Algona.....	M. G. Bourne, Algona.....	J. G. Clapsaddle, Burt
Lee.....	R. E. Cooper, Keokuk.....	H. T. Werner, Ft. Madison.....	R. L. Feightner, Fort Madison
Linn.....	D. S. Challed, Cedar Rapids.....	John Parke, Cedar Rapids.....	G. H. Ashline, Keokuk
Louisa.....	E. S. Groben, Columbus Junction.....	J. H. Chittum, Wapello.....	B. F. Wolverton, Cedar Rapids
Lucas.....	H. D. Jarvis, Chariton.....	R. E. Anderson, Chariton.....	J. H. Chittum, Wapello
Lyon.....	A. C. Wubbena, Rock Rapids.....	S. H. Cook, Rock Rapids.....	S. L. Throckmorton, Chariton
Madison.....	G. J. Anderson, Winterset.....	P. F. Chesnut, Winterset.....	S. H. Cook, Rock Rapids
Mahaska.....	M. R. Greenlee, Oskaloosa.....	R. M. Collision, Oskaloosa.....	C. B. Hickenlooper, Winterset
Marion.....	F. M. Roberts, Knoxville.....	D. S. Burbank, Pleasantville.....	E. B. Wilcox, Oskaloosa
Marshall.....	R. C. Carpenter, Marshalltown.....	H. E. Sauer, Marshalltown.....	H. L. Bridgeman, Knoxville
Mills.....	W. A. DeYoung, Glenwood.....	T. E. Shonka, Malvern.....	A. D. Woods, State Center
Mitchell.....	W. E. Owen, St. Ansgar.....	C. F. Watson, Stacyville.....	D. W. Harman, Glenwood
Monona.....	L. A. Gaukel, Onawa.....	P. L. Wolpert, Onawa.....	T. S. Walker, Riceville
Monroe.....	H. J. Richter, Albia.....	T. A. Moran, Melrose.....	C. W. Young, Onawa
Montgomery.....	Helge Borre, Red Oak.....	E. M. Sorensen, Red Oak.....	H. J. Richter, Albia
Muscatine.....	K. E. Wilcox, Muscatine.....	R. W. Asthaler, Muscatine.....	Oscar Alden, Red Oak
O'Brien.....	J. C. Peterson, Hartley.....	W. S. Balkema, Sheldon.....	C. P. Phillips, Muscatine
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Pocahontas.....	J. B. Thielen, Fond du Lac.....	C. L. Jones, Gilmore City.....	W. L. Downing, Le Mars
Polk.....	Fred Sternagel, West Des Moines.....	B. M. Merkel, Des Moines.....	C. L. Jones, Gilmore City
Pottawattamie.....	Isaac Sternhill, Council Bluffs.....	S. A. Cohen, Council Bluffs.....	J. B. Synhorst, Des Moines
Poweshiek.....	T. E. Brobyn, Grinnell.....	E. S. Korfmacher, Grinnell.....	G. N. Best, Council Bluffs
Ringold.....	W. G. Doss, Mount Ayr.....	J. W. Hill, Mount Ayr.....	C. E. Harris, Grinnell
Sac.....	J. W. Gauger, Early.....	C. E. Lierman, Lake View.....	E. J. Watson, Diagonal
Scott.....	E. G. Sentry, Davenport.....	M. J. Brown, Davenport.....	J. R. Dewey, Schaller
Shelby.....	L. W. Savage, Harlan.....	J. H. Spearing, Harlan.....	A. P. Donohoe, Davenport
Sioux.....	L. R. Hegg, Rock Valley.....	C. B. Murphy, Alton.....	Wm. Doornink, Orange City
Story.....	Richard Mordaunt, Nevada.....	W. B. Armstrong, Ames.....	Bush Houston, Nevada
Tama.....	C. R. Roberts, Dysart.....	A. J. Havlik, Tama.....	A. A. Pace, Toledo
Taylor.....	G. W. Rimmel, Bedford.....	M. R. Crew, Clearfield.....	G. W. Rimmel, Bedford
Union.....	J. G. Macrae, Creston.....	C. E. Sampson, Creston.....	C. C. Rambo, Creston
Van Buren.....	J. T. Worrell, Keosauqua.....	L. A. Coffin, Farmington.....	L. A. Coffin, Farmington
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Washington.....	D. G. Sattler, Kalona.....	W. S. Kyle, Washington.....	F. D. Miller, Wellman
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Woodbury.....	E. M. Honke, Sioux City.....	E. H. Sibley, Sioux City.....	D. B. Blume, Sioux City
Worth.....	S. S. Westly, Manly.....	G. S. Westly, Manly.....	S. S. Westly, Manly
Wright.....	R. L. Gorrell, Clarion.....	J. R. Christensen, Eagle Grove.....	J. H. Sams, Clarion

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FRANK R. PETERSON, M.D., Cedar Rapids

NEW SPEAKERS BUREAU COMMITTEE

Dr. Harold Margulies of Des Moines has assumed the chairmanship of the Speakers Bureau, replacing Dr. Herman J. Smith of Des Moines. New members of the committee are Drs. James H. Allen, Iowa City, Charlotte Fisk, Des Moines, and Frank R. Peterson, Cedar Rapids. Drs. John I. Marker, Davenport, Horace M. Korn, Dubuque, and Robert N. Larimer, Sioux City, will continue to serve.

FUNCTIONS OF THE BUREAU

The aim of the Speakers Bureau is to encourage and coordinate medical education in Iowa. Its primary interest is in serving the physicians in practice by bringing qualified speakers to them at a convenient time and place, with discussions of subjects which are of real importance. This is arranged most effectively through the county societies. Furthermore, the most accurate information concerning the needs and wishes of physicians in Iowa is available only by spontaneous suggestions from those individuals. These can be made directly to us or through the county societies; in either case we are eager to hear from you.

In the fall of 1949 another series of cancer institutes will be held. These are being sponsored by the Cancer Division of the State Department of Health and the Iowa Division of the American Cancer Society. The Speakers Bureau has already begun arranging for these, so that they can be completed before severe weather interferes with attendance. Funds are adequate to have enough meetings so the entire state is covered. We will be pleased to hear from any district which desires to have an institute.

We also plan to continue the postgraduate training programs which have been so successful. These are planned for the benefit of those who feel the need of a "refresher" on all phases of medicine and who prefer to get it in concentrated form at home. These will be extended to new areas as we receive evidences of interest.

METHODIST HOSPITAL CLINICS

Iowa Methodist Hospital in Des Moines has a fine program outlined for the coming year. Starting in July 1949, the intern-resident teaching will be supplemented by meetings at least five days each week at 12:30 noon. Each specialty group will have a

clinical meeting usually centered around a patient in the hospital at the time. One day each week a basic science subject will be discussed by members of the staff. The pediatric clinic as before will be at 11:00 o'clock on Friday. Physicians will be welcome to attend any of these meetings without previous notice.

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Tuesday at 11:30 a. m.

WOI—Thursday at 11:15 a. m.

June 7-9	Safety-First Mr. E. N. McIlrath, American Red Cross, Des Moines
June 14-16	Hot Weather and Skin Disorders Herbert C. Leiter, M.D., Sioux City
June 21-23	Asthma and Hay Fever George M. Ellison, M.D., Clinton
June 28-30	Summer Eating Miss May Morris, Dietician, Veterans Hospital, Des Moines

LECTURE ON PSYCHODRAMA AT KNOXVILLE VA HOSPITAL

Dr. Jacob L. Moreno of New York City will lecture on psychodrama at the Veterans Administration Hospital in Knoxville. The discussion is scheduled for Tuesday, June 21, at 8:00 p.m.

Dr. Moreno is superintendent of Beacon Hill Sanatorium in New York and also director of the Psychodramatic Institute. He is on a country-wide lecture tour, and we are very fortunate in having him in this area to speak. All physicians and people in allied professions are invited and urged to attend. This is an unusual opportunity to hear an excellent discussion, so mark the time and date on your appointment calendar and plan to be there.

CHANGE OF ADDRESS

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the Journal, 505 Bankers Trust Bldg., Des Moines 9, Iowa.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

THE AMERICAN NURSES DICTIONARY—The Definition and Pronunciation of Terms in the Nursing Vocabulary—By Alice L. Price, B.S., R.N., Instructor in Nursing Arts at Columbia Hospital, Milwaukee. Philadelphia and London, W. B. Saunders Company, 1949. Price \$3.75.

CARE OF THE SURGICAL PATIENT—Including Pathologic Physiology and Principles of Diagnosis and Treatment—By Jacob Fine, M.D., Surgeon-in-Chief, Beth Israel Hospital; Professor of Surgery at Beth Israel Hospital, Harvard Medical School, Philadelphia and London, W. B. Saunders Company, 1949. Price \$8.00.

CLINICAL AUSCULTATION OF THE HEART—By Samuel A. Levine, M.D., Clinical Professor of Medicine, Harvard Medical School; Physician, Peter Bent Brigham Hospital; and W. PROCTOR HARVEY, M.D., Research Fellow in Medicine, Harvard Medical School; Assistant in Medicine, Peter Bent Brigham Hospital. Philadelphia and London, W. B. Saunders Company, 1949. Price \$6.50.

CORONARY ARTERY DISEASE—By Ernst P. Boas, M.D., Associate Physician, Mount Sinai Hospital, New York City; and NORMAN F. BOAS, M.D., Chicago, The Year Book Publishers, Inc., 1949. Price \$6.00.

HANDBOOK OF MATERIA MEDICA, TOXICOLOGY, AND PHARMACOLOGY—By Forrest Ramon Davison, B.A., M.Sc., Ph.D., M.D., Consultant and Toxicologist, Minneapolis, Minn.; Formerly Assistant Professor of Pharmacology in the School of Medicine, University of Arkansas, Little Rock; Medical Department, The Upjohn Co., Kalamazoo, Mich.; Assistant Professor Pharmacology, University of Tennessee Medical School; Toxicologist to University Clinics, Memphis,

Tenn. Fourth Edition. St. Louis, The C. V. Mosby Company, 1949. Price \$8.50.

HISTOLOGY AND HISTOPATHOLOGY OF THE EYE AND ITS ADNEXA—By I. G. Sommers, M.D., Assistant Professor (Ophthalmology), College of Medical Evangelists; Medical Officer (E.E.N.T.), U. S. Public Health Service, Los Angeles, Calif. New York, Grune & Stratton, 1949.

INTERNATIONAL DIGEST OF HEALTH LEGISLATION—World Health Organization, Geneva.

MANUAL OF THE INTERNATIONAL STATISTICAL CLASSIFICATION OF DISEASES, INJURIES, AND CAUSES OF DEATH—Sixth Revision of the International Lists of Diseases and Causes of Death. Adopted 1948. Vol. I. World Health Organization, Geneva, 1948.

NUTRITION AND DIET IN HEALTH AND DISEASE—By James S. McLester, M.D., Professor of Medicine, University of Alabama, Birmingham. New Fifth Edition. Philadelphia and London, W. B. Saunders, 1949. Price \$9.00.

1948 YEAR BOOK OF ENDOCRINOLOGY, METABOLISM AND NUTRITION—Edited by Willard O. Thompson, M.D., Clinical Professor of Medicine, University of Illinois College of Medicine; Attending Physician (Senior Staff), Henrotin Hospital; Attending Physician, Grant Hospital, Chicago; and TOM D. SPIES, M.D., Chairman, Department of Nutrition and Metabolism, Northwestern University School of Medicine; Director, Nutrition Clinic, Hillman Hospital, Birmingham, Ala. Chicago, The Year Book Publishers, Inc., 1949. Price \$4.50.

BOOK REVIEWS

ENDOCRINE THERAPY IN GENERAL PRACTICE

By Elmer L. Sevringhaus, M.D., F.A.C.P., Formerly Professor of Medicine, University of Wisconsin; Director, Endocrine and Nutritional Clinics, Gouverneur Hospital, New York City. The Year Book Publishers, Inc., Chicago, 1948. Price \$4.00.

This book by Dr. Sevringhaus should be read by all physicians. He uses the pituitary gland as the focus of his discussion, and then, using the various factors from this gland, reaches out and connects it with the other internal glands of secretion. The mass of complicated and disputed theories are omitted from this writing.

The book brings together in a workable fashion the various endocrine disease processes, and the definite therapy as indicated for each specific entity.

D. A. M.

PATHOLOGY

Edited by W. A. D. Anderson, M.A., M.D., F.A.C.P., Professor of Pathology and Bacteriology, Marquette University School of Medicine, Milwaukee, Wisc. The C. V. Mosby Co., St. Louis, 1948. Price \$15.00.

This pathology textbook, written by Dr. Anderson and 31 collaborators, has 1,453 pages, in which there are 1,183 figures and 10 well selected color plates. The author, by having collaborators write the chap-

ters in which they have special knowledge, has attempted to produce a textbook of pathology that is well balanced in the various branches of the broad subject matter of present day pathology. Coordination of the subject under discussion is often secured by references in the text to other authors discussing other phases of the same subject. Selected references at the end of the chapters are given for those particularly interested in this subject.

A few subjects in which there have been considerable recent developments are given special attention. There is a chapter devoted to "Effects of Radiation." Other chapters presenting rather extensive consideration are "Rickettsial and Viral Diseases," "Protozoal and Helminthic Infections," and "The Skin." There is also a chapter for each of the endocrine glands.

The index will no doubt be enlarged and improved in succeeding editions. As an example, there is no reference in the index to such a common condition as carcinoma of the rectum. Under the subject "carcinoma" there are only 9 subjects referred to, and the stomach is the only organ referred to in this connection. Carcinoma of the breast, colon, uterus, etc., are mentioned in the index under the title of the organ, but not under carcinoma.

The subject matter of pathology is well presented and very inclusive in this book, and should prove of much value to the student of pathology.

F. W. M.

PREMATURE INFANTS, A MANUAL FOR PHYSICIANS

By Edith C. Dunham, M.D., Federal Security Agency, Social Security Administration, Children's Bureau, 1948. Price \$1.25.

Dr. Dunham, one of the foremost authorities on the subject at hand, deals at length with the problems incident to premature birth. The manual is divided into two separate parts. The first deals with general considerations of the condition. Evaluation of definitions, objective measures of prematurity, incidence, causes and prevention, mortality rates, hospital statistics, growth curves and prognosis are all dealt with in detail. Much of the material is statistical, but, when one realizes that the statistics depend on the type of care given to the tiny infants, the figures assume new importance.

The second part deals with clinical considerations and the care to be given to the immature infant. Criteria for clinical appraisal are given. There is practically a step by step plan for the care of the infant from the time that it leaves the mother's uterus. The steps in the plan include means of resuscitation, oxygen administration, regulation of temperature and humidity, the use of incubators, care of the skin, proper clothing, etc. The handicaps of the premature state are discussed.

Lastly, the appendix includes methods and criteria for certification of liveborn and stillborn infants, growth and development charts, incubator specification, a guide for parenteral fluid administration, and suggested forms for clinical records.

R. C. E.

SHOCK AND ALLIED FORMS OF FAILURE OF THE CIRCULATION

By H. A. Davis, M.D., C.M., F.A.C.S., Associate Professor of Surgery, Graduate School of Medicine, College of Medical Evangelists, Los Angeles Division; Senior Attending Surgeon, Los Angeles County General Hospital and White Memorial Hospital; Visiting Surgeon, Cedars of Lebanon Hospital and California Hospital. Grune & Stratton, New York, 1949. Price \$12.00.

This text is a comprehensive summary of present concepts of shock. The defined scope of the book is far broader than what is usually considered shock by a physician. The material presented covers the work of the author, and all other workers, in a reasonably unbiased manner. It is doubtful that the book is likely to be of much immediate value to the practitioner who is not unusually interested in the entire subject. It is not designed as a practical guide to therapy, for example, as judged by the mass of laboratory work recommended for the victim of any of the shock states discussed. It may well be used for reference work, since it is complete, current, and

has the kind of bibliography that required a great amount of investigation. The book might have had more value if the author had chosen to limit more definitely the subject discussed. He has foreseen this criticism, however, and defended his decision. The reader may answer for himself the wisdom of his plan.

H. M.

SURGERY OF THE HAND

By Sterling Bunnell, M.D., Honorary Member of the American Academy of Orthopedic Surgeons, Member of American Surgical Association, American Association of Plastic Surgeons, American Society of Plastic and Reconstructive Surgery, American Association for the Surgery of Trauma and American Society for Surgery of the Hand; Consultant in Hand Surgery to the Surgeon General, Licentiate of American Board of General Surgery and Plastic Surgery, Corresponding Member of British Orthopedic Association. Second Edition. J. B. Lippincott Co., Philadelphia, 1948. Price \$16.00.

Dr. Bunnell's textbook has been the "bible" of hand surgery since the first edition was published in 1944. It was the first textbook dealing exhaustively with hand surgery in all its phases. Surgeons the world over had been looking for an authoritative reference dealing not only with infections of the hand, but with compound injuries, burns, tendon lacerations, malformations, tumors, and all the conditions to which the hand is subject. The first edition was the answer to this need. Already its influence has been enormous in stimulating interest in surgery of the hand and in improving the quality of hand surgery done.

Now comes the second edition, incorporating in the previous text the huge experience in traumatic surgery of the hand afforded by World War II. Dr. Bunnell served as Civilian Consultant to the Surgeon General in the field of hand surgery, and, in this capacity, he personally directed the program in the Army and Navy Centers, where some 20,000 hands were reconstructed.

This experience has been summarized and recorded by Dr. Bunnell and is now available to all. The text is profusely illustrated with drawings and photographs, many in color, taken from the recent war experience.

Since disabilities of the hand are so common and so devastating in their effect, this authoritative text should be on the shelf of every hospital library and on the desk of every surgeon who undertakes to operate on that delicate and important member, the human hand.

J. M. B.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. ROGER M. MINKEL, Fort Dodge

President-elect—MRS. CLAIRE H. MITCHELL, Indianola

Secretary—MRS. IVAN K. SAYRE, St. Charles

Treasurer—MRS. WILLIAM B. CHASE, JR., Des Moines

Corresponding Secretary—MRS. CHARLES H. COUGHLAN, Fort Dodge

LINES FROM THE PRESIDENT

Last month an appeal was made to every Auxiliary member to mobilize without delay every member and doctor's wife in the state and to be ready for action. In May every Auxiliary member received that call to action, our immediate objectives being the defeat of the compulsory health insurance bill in Congress, and our long range objective being the expansion and development of voluntary health insurance plans. Our work toward achieving these goals has included securing endorsements, distributing literature, and getting and filling speaking engagements and publicity development. County presidents are requested to forward to Auxiliary headquarters, 629 Eleventh Avenue, North, Fort Dodge, an account of collective or individual activities in this direction. Members-at-large are requested to do the same.

In pursuing the defeat of the compulsory health insurance bill, we ask that you not forget the program upon which the Auxiliary works during the year and that you give your continued support to Student Nurse Recruitment, the Nurse's Loan Fund, Work for the Handicapped, and other health programs.

Mrs. Roger M. Minkel,
President

AUXILIARY HEADQUARTERS 1949-1950

Auxiliary headquarters have been changed from 505 Bankers Trust Building, Des Moines, to: Mrs. Roger M. Minkel, president, 422 N. Fourteenth Street, Fort Dodge; Mrs. C. H. Coughlan, corresponding secretary, 629 Eleventh Avenue, North, Fort Dodge. Requests for material or questions regarding Auxiliary work should be directed to either the president or corresponding secretary.

REPORT OF ANNUAL MEETING

The Woman's Auxiliary to the Iowa State Medical Society held its twentieth annual meeting at the Hotel Savery April 19 and 20, 1949. Mrs. A. G. Felter, president, presided at all meetings. Mrs. Luther H. Kice, president of the Woman's Auxiliary to the A.M.A., and Mrs. H. F. Wahlquist, president of the Woman's Auxiliary to the Minnesota State Medical Society, were honored guests.

Reports of the officers and chairmen of state com-

mittees were heard at the Executive Board Meeting on Tuesday morning. The theme of the entire meeting was the fight against socialized medicine. Mrs. Cecil Jones and her Legislative Committee drafted a resolution toward this end, which was passed upon and sent to President Truman. A resolution of the same nature was sent to the proper individuals for presentation at the biennial meeting of the Iowa Federation of Women's Clubs, scheduled for April 23 at Waterloo.

There was a large attendance at the luncheon. Mr. L. W. Rember, of the A.M.A. headquarters in Chicago, discussed compulsory health insurance and the effort the A.M.A. is putting forth against it by means of an extended educational campaign through radio, newspapers, periodicals, speeches and contacts with many organizations, particularly women's organizations. The staff of the A.M.A. has been considerably enlarged. Mr. Rember's two most provocative thoughts were: "The people must determine whether they want men of medicine or medicine men," and "When medicine goes down, it is the beginning of the end."

Mrs. H. F. Wahlquist discussed the manner in which the Woman's Auxiliary to the Minnesota State Medical Society has conducted several "Health Days" throughout the state. These have been enormously successful, and the Minnesota Auxiliary has received much praise for its work. Laymen have learned that "Health is their problem and should be their program." By coordinating the forces of their state health department, the county medical societies and Auxiliaries, and lay organizations which have health programs, local communities and whole sections of the state were made aware of their health needs. Luncheons or dinners sponsored by the county medical societies or Auxiliaries provided opportunities, as well as the planned meetings, for speeches by local and professional people and also for legislators. Poster and essay contests interested young people in health needs. Exhibits, radio and newspaper publicity aroused interest in the established health day. In some instances, health councils were the result. Housing, nutrition, sanitation and related health interests became lay problems. Specific instructions on setting up "Health Days" will be available in bulletin form soon from Mrs. H. F. Wahlquist, 129 W. Forty-eighth, Minneapolis, Minnesota.

Presiding at the round-table discussion, Mrs. R. M. Minkel, president-elect, developed the thought that "Health is the concern of the Auxiliary; the work is the responsibility of the individual members." Each member can forward the state Auxiliary program individually in her own community. Each member can ascertain if taxes collected for health projects are being satisfactorily used for such. Each member can make an effort to see that school round-up examinations are followed up.

Mrs. Luther H. Kice reported that the Woman's Auxiliary to the A.M.A. has financially assisted not only 1,000 girls toward nursing careers, but also a number of prospective doctors.

Following the luncheon, a tea in honor of guests and county presidents was held at the Des Moines Art Center.

At the general meeting Wednesday morning, regular order of business was conducted by the president, Mrs. Felter. All official reports which were submitted will appear in this and following issues of "The Woman's Auxiliary News." Mrs. Felter reported a membership of 750, with 32 counties organized, a gain of 9 counties. There are approximately 60 reported subscriptions to "The Bulletin."

The treasurer, Mrs. M. A. Royal, reported a balance on hand to date of \$1,080.27. Mrs. W. R. Hornaday, chairman of the Student Nurse Loan Fund, reported a balance on hand of \$219.72 with two girls in training. She has had other requests for assistance, but, since many county Auxiliaries failed to send 50 cents per member as was suggested in the state program last year, it has been necessary for her to make appeals to other organizations which sponsor loan funds. All county auxiliaries are earnestly called upon to pay their quotas toward this fund, which has been one of the main projects of the state Auxiliary for the past several years. In the face of the great need for more nurses in training, 50 cents per member is only a modest request.

Dr. Louis A. Buie, Mayo Clinic, Rochester, Minn., gave a compelling talk against socialized medicine. He quoted up to the minute figures and laid special emphasis on the Veteran's Administration Program, which is the purest form of government medicine today; many aspects of it have been badly managed. There are 19 million people entitled to this service. How much worse would a program be which involved the entire population of the United States.

At the luncheon, which was well attended, special guests included Mrs. Luther H. Kice, Mrs. H. F. Wahlquist, Dr. James E. Reeder, president of the Iowa State Medical Society, and Dr. Nathaniel G. Alcock, president-elect of the Iowa State Medical Society. Both doctors brought greetings.

As the principal speaker, Mrs. Kice reviewed some of her activities as president of the Woman's Auxiliary to the A.M.A. She has found it impossible to place free copies of *Hygieia* in railroad or bus stations, although free material of religious sects

is accepted. She urged that Auxiliary members read and disseminate copies of "Uncle Sam, M.D." and that they keep informed and help to inform others on the evils of socialized medicine. She named some of the large national organizations which favor compulsory health insurance and recommended that doctors' wives, many of whom are board members in these organizations, present the professional viewpoint. She maintained that all Auxiliaries can do something, and "Every Auxiliary should do the something that it can do." She recommended that Auxiliaries support efforts to form local health units and that the state Auxiliary take advantage of opportunities to send delegates to national conferences stressing health topics.

The following officers were elected and duly installed by Mrs. E. T. Warren, a past president: *President*—Mrs. Roger M. Minkel, Fort Dodge; *President-elect*—Mrs. Claire H. Mitchell, Indianola; *First Vice President*—Mrs. Howard W. Smith, Woodward; *Second Vice President*—Mrs. Morris G. Beddoes, Oelwein; *Recording Secretary*—Mrs. Ivan K. Sayre, St. Charles; *Corresponding Secretary*—Mrs. Charles H. Coughlan, Fort Dodge; *Treasurer*—Mrs. William B. Chase, Jr., Des Moines; *Directors*—Mrs. Frederick G. Murray, Cedar Rapids; Mrs. Fred Moore, Des Moines; Mrs. Allen C. Starry, Sioux City; *Councillors*—Mrs. Allan G. Felter, Van Meter; Mrs. Donovan F. Ward, Dubuque; Mrs. Elias B. Howell, Ottumwa; Mrs. J. Donald Hennessy, Council Bluffs; Mrs. Don F. Rodawig, Spirit Lake.

There was a registration of 175. Nine past presidents attended. Mrs. M. N. Voldeng, Des Moines, and Mrs. Frederick Murray, Cedar Rapids, first president and first secretary, respectively, of the Iowa Auxiliary, were present. At the post-convention board meeting, Mrs. Roger M. Minkel, president, presided. The board voted unanimously to change Auxiliary headquarters to Fort Dodge for 1949-1950, so that all material will be centralized with the president and corresponding secretary. It was agreed that the Auxiliary cooperate with the Medical Society in an effort to train key speakers to oppose socialized medicine when the impetus was given by the Medical Society. The president was empowered to appoint delegates and alternates to the national convention. Copies of model county constitutions and "What Every Auxiliary Member Should Know" will be available through Auxiliary headquarters.

Chairmen of standing committees appointed to date are: *Archives*—Mrs. Fred Moore, Des Moines; *Finance*—Mrs. Marion H. Brinker, Jefferson; *Legislation*—Mrs. Cecil C. Jones, Des Moines; *National Bulletin*—Mrs. Frank D. Edington, Spencer; *Organization*—Mrs. Howard W. Smith, Woodward, and Mrs. M. G. Beddoes, Oelwein; *Publications*—Mrs. Keith M. Chapler, Dexter; *Public Relations*—Mrs. Allan B. Phillips and Mrs. Loyd K. Shepherd, Des Moines; *Student Nurse Loan Fund*—Mrs. William R. Hornaday, Des Moines.

PRESIDENT'S REPORT, 1948-1949

As I look back over the year, I feel very humble, realizing that there is much I should have done but which for lack of time, lack of foresight or frustrating weather conditions was not accomplished. I close the year, however, grateful that I have had the privilege of being your president. The year will ever be rich in memories, in new and close-knit friendships, and in satisfaction that I have had a part in helping to sustain the honor of the medical profession through a program of health education.

This year began as a continuation of the preceding one which was rich in accomplishment. The roster of doctors' wives was completed by Mrs. C. A. Nicoll and myself and mimeographed at the central office. The nurse survey, begun at the request of the Iowa State Nurses' Association, was finished under the direction of Mrs. H. W. Smith.

Soon after the last annual meeting, I completed all standing committees and during the year conferred with them as it seemed advisable. For inspiration and helpful ideas, I set up an exchange of bulletins and news sheets with five state Auxiliaries. Believing that an informed Auxiliary is a working Auxiliary, I relayed to Mrs. K. M. Chapler, publications chairman, the mass of factual material sent to me. I am grateful to her for the time she spent in preparing it for the News Letter. Knowing that I could not visit all the county Auxiliaries, I started "Lines From the President," which appeared in 10 News Letters. I have either attended or appointed someone to attend the state meetings of the various health improvement organizations. I was present at the annual fall public relations meeting of the Iowa State Medical Society and at two such meetings this spring. Also, I attended a conference on nursing problems called by the Iowa State Nurses' Association; the open house of the Iowa Society for the Crippled and Disabled; two meetings of the Iowa Council for Better Education; the Laura Richards dinner of the sixth district of registered nurses; and the sixth district meeting of public health nurses, where I presented the aims and projects of the Auxiliary. Last June I attended the annual meeting of the National Auxiliary and in November the National Conference for Presidents and Presidents-elect, which, under Mrs. Kice's leadership, was outstanding.

The time being ripe for organization, I picked up previous correspondence and made new contacts. I attended organization meetings of Marshall, Appanoose, Fayette and Winneshiek counties, and a reorganization meeting of four counties at Spencer (formerly the Upper Des Moines District). Now Dickinson, Clay and Emmet have county Auxiliaries and Palo Alto hopes to have soon. I regret that road conditions did not permit me to accept invitations to Dubuque, Delaware and Carroll counties. I was privileged to attend the meetings of Polk, Dallas-Guthrie and Wapello counties. I am pleased to announce that Iowa has grown from 23 to 32 Auxiliaries during the year, with a membership of 750,

and I am deeply grateful to those persons who had done the groundwork and who assisted me in organization.

Over 300 pieces of mail have gone from my desk and each county president has received at least one personal letter from me. I appreciate the help of my corresponding secretary, Mrs. Robert P. Mason, who, besides the typing she did, when 1350 copies of "Uncle Sam—M.D." came to me, gathered a committee and sent one to each doctor's wife who had not received the pamphlet. Correspondence and meeting with Miss Parker, state superintendent of public instruction, was encouraging in that she promised to emphasize the merit of *Hygeia* and its use by teachers.

Having declined invitations to Oklahoma, Georgia and Nebraska state meetings, I sent greetings from Iowa. I was privileged to attend the twenty-fifth anniversary meeting of the Missouri Auxiliary, March 29, at Kansas City.

Besides sending the usual calls to board meetings, to the Annual Meeting, for dues and for reports, I have brought *Answers to Your Questions* up to date, and prepared the "President's Book" for my successor, Mrs. Roger M. Minkel.

I believe that the Auxiliary is steadily gaining a sense of direction and purpose. This year I have necessarily emphasized organization and public relations in its inclusive sense. Our application for membership in the Iowa Council For Better Education was approved, and we are now a member of that group. I was asked by the Iowa State Department of Health to appoint a representative from the Auxiliary to the Regional Conference called by the National Public Health Association for April in Omaha. Since a team of only 15 will attend from Iowa, this recognition should be most gratifying to us.

I wish to acknowledge the fine cooperation and support given me by the officers, councilors, directors and committee chairmen. Their reports show the time and effort they have given. For some it has meant several tedious trips to Des Moines. I wish also to mention the interest of several members-at-large, evidenced by their sending reports, the promptness of most county presidents in preparing their reports, and the encouragement and hospitality accorded me by doctors' families.

I do appreciate more than I can express the help and co-operation of Miss Mary McCord and Mr. Donald L. Taylor, and the encouragement of Dr. Reeder, Dr. Phillips and Dr. Sternagel in our public relations work. I am also deeply grateful to convention chairman, Mrs. C. L. Putnam, and her co-chairman, Mrs. Burlin Keen; also to Mrs. H. J. McCoy, president, Polk County Auxiliary, and to all the members of Polk County Auxiliary who have worked so faithfully to make this meeting a successful and happy one. I can only say "thanks" to all of you for everything you have done to make the year very pleasant; also "thanks" for your for-

bearance. I shall not lose my interest in the Auxiliary. May it advance to greater usefulness.

Respectfully submitted,
Mrs. Allan G. Felter, President

RESOLUTION OPPOSING COMPULSORY NATIONAL HEALTH INSURANCE

Whereas, under a system of free enterprise, the American medical profession has established the world's highest standard of scientific performance, treatment, and research, thereby helping the United States to become the healthiest major nation in the world; and

Whereas, the benefits of American medicine are available to the people of this country through budget-basis voluntary health insurance, the best health insurance which exists in the world; and,

Whereas, compulsory health insurance, wherever tried, has caused a decline in national health and deterioration of medical standards and facilities to the detriment of family welfare; and,

Whereas, compulsory health insurance would result immediately in a tax of 3 per cent on the income of the American working man, rising within a few years to 6 per cent and higher, creating a new tax burden which would reduce household budgets and bring down family standards of living; and,

Whereas, government control of medical services, by gradually undermining free enterprise and establishing heavy new tax burdens and unprecedented national deficits, would threaten national bankruptcy and encourage the spread of socialism, which would endanger the rights of our children to the individual freedoms which have been the American heritage, *Now, Therefore*,

Be It Resolved, that the Women's Auxiliary to the Iowa State Medical Society does hereby go on record against any form of compulsory health insurance or any system of political medicine designed for national bureaucratic control;

That a copy of this resolution be forwarded to the President of the United States, to each Senator and Representative from the state of Iowa, and that said Senators and Representatives be and are hereby respectfully requested to use every effort at their command to prevent the enactment of such legislation.

RESOLUTIONS

Whereas, The Woman's Auxiliary of the Iowa State Medical Society has been the recipient of many courtesies:

Be It Resolved, that the Woman's Auxiliary express its appreciation to those who have extended their hospitality to us, to the convention committee chairman and co-chairman, Mrs. C. L. Putnam, Mrs. Berlin Keen; president of the Polk County Medical Auxiliary, Mrs. Harold J McCoy; and chairman of local publicity, Mrs. H. G. Decker.

Be It Further Resolved, that appreciation be expressed to Mrs. Luther Kice, president of the Woman's Auxiliary to the American Medical Association for her inspirational address and general helpfulness; to Mrs. L. H. Wahlquist, president of the Minnesota State Medical Auxiliary for her presence; to Dr. James E. Reeder, president of the Iowa State Medical Society, and to Dr. Nathaniel G. Alcock, for their greetings and interest in the Auxiliary; to Dr. Louis A. Buie for his timely address; to the Board of Trustees for their financial support; to Miss Mary McCord of the office staff of the Iowa State Medical Society for invaluable assistance throughout the year; to our president, Mrs. Allan G. Felter, for her capable and loyal service during the past year; to Mrs. Roger M. Minkel, president-elect; to Mrs. C. T. Maxwell, recording secretary; to Mrs. R. P. Mason, corresponding secretary, appreciation for their services; to the press for its courtesy and consideration; to the Savery Hotel for its cooperation; and to all those unidentified persons whose thoughtfulness has made our convention a success.

Mrs. C. A. Nicoll
Mrs. A. D. Dean
Mrs. D. F. Rodawig
Mrs. I. N. Crow

ACTIVITIES OF COUNTY AUXILIARIES

Butler County

The Butler County Auxiliary meets once a month with the Medical Society for dinner. New officers for 1949 are: Mrs. E. M. Mark, president; Mrs. F. F. McKean, vice president; Mrs. M. D. Enna, secretary and treasurer. Programs for the year have been prepared and distributed to all members. Work is being done on the Nurse Recruitment Program, of which Mrs. F. A. Rolfs is chairman. The program for *Hygeia* promotion has been completed.

Mrs. M. D. Enna

Delaware County

The Delaware County Medical Society and Auxiliary met at the Glen Charles Hotel on April 13 for a 6:30 dinner. Mrs. Rosalie Snyder, field director for the Iowa Cancer Society was guest speaker, after which separate meetings were held.

The report on *Hygeia* showed a good coverage but not many subscriptions or renewals were obtained as many were long time subscriptions and had some years to run. A copy of the article, "The Taxpayer and National Health Bill S-5," was sent to practically all organizations, clubs, high schools and weekly newspapers in the county.

Guest speaker was Mrs. Robert Winistorfer, R.N., Earlville, who gave an interesting report of her work at Fort Defiance, Arizona, the Navajo Indian Reservation. Other guests were Mrs. Rosalie Snyder, Corydon, Mrs. Robert Wray, and Mrs. W. John Robb of Cedar Rapids.

Mrs. B. H. Byers,
Publicity Chairman

SOCIETY PROCEEDINGS

MEETINGS

Black Hawk County

The regular meeting of the Black Hawk County Medical Society was held May 17 at the Elks Club in Waterloo. Speaking on "Carcinoma of the Colon" was Dr. Louis E. Moon, president-elect of the American Proctological Society. A movie on operative treatment of anorectal lesions was shown.

Butler County

The Butler County Medical Society met April 11 at the home of Dr. and Mrs. E. M. Mark in Clarks-ville.

Dr. and Mrs. Fred Rolfs of Aplington were hosts to the Society and its Auxiliary on May 9.

Calhoun County

The Calhoun County Medical Society met April 28 at the Twins Inn in Lake City. A movie on rheumatic fever, "We See Them Through," was presented and later discussed.

Cerro Gordo County

The Cerro Gordo County Medical Society held its monthly dinner meeting on May 9 at Hotel Cerro Gordo. Dr. Lewis E. January, of Iowa City, assistant professor of internal medicine, spoke on "Anti-Coagulant Therapy."

Delaware County

The Delaware County Medical Society met with the Auxiliary for dinner April 20 at the Glen Charles Hotel at Manchester. Speakers for the medical meeting following were Drs. Robert M. Wray and W. John Robb, both of Cedar Rapids.

Harrison County

The Harrison County Medical Society met May 5 at Dr. Hans Hansen's office in Logan. Dr. C. W. Byrnes was elected president to replace Dr. Carl Walvørd, who has moved to Omaha, Neb. Dr. C. W. Byrnes read a paper on "Head Injuries."

Iowa-Illinois Central District Medical Association

The annual meeting of the Iowa-Illinois Central District Medical Association was held May 25 in Rock Island, Ill. On the program was Dr. Carl A. Hamann, instructor in surgery, Western Reserve University School of Medicine, Cleveland, Ohio, who spoke on "The Place of Surgery in Facial Cancer." Dr. John Van Prohaska, associate professor of surgery, University of Illinois College of Medicine, Chicago, spoke on "Total Gastrectomy in the

Treatment of Carcinoma of the Stomach." Following dinner, Dr. W. Barry Wood, Jr., professor of medicine and head of the department of internal medicine, Washington University School of Medicine, St. Louis, spoke on "The Treatment of Acute Bacterial Infections."

Johnson County

At a meeting May 4 at Hotel Jefferson in Iowa City, the Johnson County Medical Society entertained about 20 doctors attending the SUI post-graduate surgery conference. Following the banquet and business meeting, Dr. Otto F. Kraushaar, resident in obstetrics and gynecology, spoke on "Early Detection of Cancer in the Uterus," and Dr. Robert C. Hickey, resident in the department of surgery, talked on "Aspiration Biopsy."

Marion County

The Marion County Medical Society met in Pleasantville May 4. Dr. Alvin Evers, of Pella, presented a paper and Dr. G. O. Laxson, of the Knoxville Veterans Hospital staff, discussed "Psychosomatic Medicine." Dr. Edmund G. Zimmerer, of the State Department of Health, presented a talk on "Cancer Control."

Page County

Page County Medical Society held a dinner meeting April 28 at the Hotel Linderman in Clarinda. Dr. Francis Simonds, an x-ray specialist from Omaha, Neb., gave a program on "The Differential Diagnosis of Cancer of the Lung."

Scott County

The Scott County Medical Society met April 5 at the Lend-a-Hand Club in Davenport. Dr. James J. Callahan, Chicago, was guest speaker at the dinner meeting, giving an illustrated lecture on "Complicated Fractures of the Elbow and Shoulder."

Wapello County

Dr. Lawrence Nelson was elected president of the Wapello County Medical Society at a meeting April 5. Other officers elected were Dr. Arthur Blome, vice president; Dr. E. B. Hoeven, re-elected secretary-treasurer, Dr. Clyde Henry, delegate and Dr. Ralph Selman, alternate. Serving on the board of censors are Drs. S. F. Singer, R. O. Hughes and William Whitehouse.

Washington County

The Washington County Medical Society held its monthly meeting April 28. Dr. C. L. Gillies of the

Radiology Department, Iowa City, gave the evening's program, "Radiographic Studies of the Abdomen," illustrated with lantern slides and x-ray films.

PERSONALS

Dr. Nathaniel G. Alcock spoke on "Socialized Medicine" at the Iowa Union YMCA rooms in Iowa City May 3 to a group of students and members of the YMCA.

Dr. L. B. Amick of Sac City gave an address on "Why Business Men Die of Heart Disease" to his home city Kiwanis Club on May 2.

Dr. William W. Baird, who has been associated with Dr. R. T. Spain since last summer, has announced the closing of his practice in Conrad.

Dr. W. B. Bean, Iowa City, attended the Sixty-second Annual Convention of the Association of American Physicians at Atlantic City, N. J., May 2 and 3.

Dr. Robert S. Bell of Iowa City spoke on "Socialized Medicine" at a meeting May 3 of Catholic nurses at Mercy Hospital in Burlington.

Dr. Walter L. Bierring was named honorary president of the Iowa Society for Mental Hygiene at a meeting April 21 in Des Moines.

Dr. George M. Boteler of St. Joseph, Mo., has been appointed assistant superintendent of the Cherokee State Hospital, replacing Dr. Fredrick Moore who is retiring from practice.

Dr. Merle J. Brown of Davenport discussed "Socialized Medicine" at a dinner meeting of Scott County Drug Association April 21 in Davenport.

Dr. Richard A. Cramer began May 16 holding office hours in Dike, in addition to his practice in Cedar Falls.

Dr. Philip Crew of Marion spoke for the opposition in a debate on socialized medicine April 20 at the Presbyterian Church in Marion.

Dr. James Devine has purchased the former Dr. J. W. McCreery Hospital at Whittemore. Dr. Devine, a graduate of the State University of Iowa College of Medicine, has been practicing in Lattimer for about three years.

Dr. R. E. Drown has become associated with Dr. A. A. Schultz in Fort Dodge. Dr. Drown, a native of Seward, Neb., was graduated from the University of Nebraska College of Medicine in 1942 and interned at Methodist Hospital in Omaha. Following three

years' service in the army medical corps, he has been a resident physician in internal medicine at the Veterans Hospital in Des Moines.

Dr. Harold J. Evans, medical director of Pine Knoll Sanitarium in Davenport, has announced his resignation effective May 15. Dr. Evans will continue his private practice in Davenport.

Dr. Russell S. Gerard of Waterloo spoke to the Belle Plaine Rotary Club on April 26 on the subject of "Socialized Medicine."

Dr. William C. Goenne of Davenport was elected president of the Iowa Clinical Surgical Society at the biennial meeting of the group on April 30 in Cedar Rapids.

Dr. Albert G. Gran of Storm Lake told of the advances in science and medicine and their importance to the American people in an address to the Storm Lake Business and Professional Women's club May 2.

Dr. Cecil V. Hamilton of Garner addressed the Lions Club there April 6 on the subject of "Socialized Medicine."

Dr. Wayland K. Hicks of Sioux City spoke on "Socialized Medicine" at the Council Bluffs Chamber of Commerce meeting April 28.

Dr. Leonard J. Hospodarsky of Ridgeway was re-elected department surgeon for 1949-1950 of the Reserve Officers' Association of Iowa at a meeting held in Des Moines April 9 and 10.

Dr. Laurence V. Larsen has become associated with Dr. Carl V. Bisgard in Harlan. A native of Audubon, Dr. Larsen was graduated from the State University of Iowa College of Medicine. He spent two years in hospital training and has served with the army medical corps.

Dr. M. O. Larson attended the two-week post-graduate course in surgery at Cook County Graduate School of Medicine in Chicago.

Dr. S. J. Lehman has joined the Cogley Clinic in Council Bluffs. A graduate of the University of Minnesota Medical School in 1942, Dr. Lehman has been practicing in Thief River Rapids, Minn. He will head a new department of ophthalmology at the clinic, specializing in eye surgery and refraction work.

Dr. Frederic G. Loomis of Waterloo spoke on "Socialized Medicine" at a meeting of Buchanan County's Young Married Couples club, held at Rowley April 11.

Dr. Thomas Mangan, who for the past four months has been associated with Drs. W. L. Whitmire and J. E. Whitmire in Sumner, has opened offices in Forest City. Dr. Mangan was graduated from the St. Louis University School of Medicine in 1947 and served his internship at St. John's Hospital in St. Louis.

Dr. Harold Margulies of Des Moines discussed "Socialized Medicine" at a dinner meeting of the Exchange Club in Fort Dodge on May 4.

Dr. A. S. McMillen of Fort Dodge has resigned his position as head of the x-ray department at Mercy Hospital in order to enter private practice. Dr. C. A. Voelker, formerly of Des Moines, is replacing him at the hospital.

Dr. R. H. Mordaunt of Nevada spoke on "The Health Situation in Story County" at the April 22 meeting of the Story County Federated Council of Republican Women's Clubs.

Dr. H. W. Morgan of Mason City was awarded a bronze medal in recognition of his services in furthering the cancer control program in Iowa. The award was presented by the American Cancer Society at the Ninety-eighth Annual Session of the Iowa State Medical Society in Des Moines April 18.

Dr. Theodore V. Niemann, who has practiced in Brooklyn for 11 years with the exception of three years in the army medical corps, has moved to his native town of Bellevue to open offices for the practice of medicine.

Dr. Albin B. Phillips of Clear Lake spoke at the Rotary Club meeting May 12 on the subject of "Socialized Medicine."

Dr. Norman D. Render of Clarinda was the speaker at the Greene County Health Council in Jefferson on April 18. His subject was "Mental Hygiene."

Dr. Glenn E. Ross has become associated in Harlan with Drs. L. W. Savage and R. E. Donlin. A graduate of Berlin University in Germany, Dr. Ross has taken additional training in Glasgow, Scotland, and has been practicing in New York City.

Dr. Leslie W. Swanson of Mason City spoke on "Socialized Medicine" for the Rotary Club meeting there May 12.

Dr. Thomas F. Thornton was honored at a stag and buffet dinner April 28 by the Black Hawk County Medical Society on his being named president-elect of the Iowa State Medical Society.

Dr. Maurice Van Allen of Davenport spoke on "Neurosurgery" at a meeting of the Quad-City Public Health Nurses in Davenport on April 25.

Dr. Henry B. Weinberg of Davenport spoke on "Socialized Medicine" at a meeting of the Brotherhood of Temple Emanuel May 11 in Rock Island.

Two additions to the staff of the McFarland Clinic in Ames were announced May 10. **Dr. George Montgomery**, a native of Boone, will specialize in heart diseases. A graduate of the University of Minnesota Medical School, Dr. Montgomery spent four years in the Army Medical Corps and has been taking special training in internal medicine at the Mayo Clinic, Rochester. **Dr. John F. Bacon**, radiologist, is a native of North Dakota and was graduated from the University of Pennsylvania School of Medicine. He served his internship in Ancker Hospital, St. Paul, Minn., and took graduate training at the Mayo Clinic.

Drs. Clark N. Cooper and **Ivan R. Powers** attended in May a continuing course in surgery at the University of Minnesota in Minneapolis.

Dr. Mayo H. Soley and **Dr. Robert Tidrick** were initiated into Alpha Omega Alpha, honorary medical fraternity, at a banquet May 5 in the Iowa Union, Iowa City.

At a recent meeting of the Iowa Association of Clinical Pathologists, **Dr. Frederick W. Mulsow** was elected president and **Dr. Arch S. McMillen** was elected secretary-treasurer for the year.

The Iowa Pediatric Society, at a meeting in Des Moines April 19, named **Dr. George Klok** of Council Bluffs, president; **Dr. Julian Boyd**, professor of pediatrics at the University of Iowa, vice president; and **Dr. James Dunn** of Davenport, secretary-treasurer.

NEW CANCER FILM

First in a new series of sound color films, "Cancer: The Problem of Early Diagnosis," is designed for the general practitioner to emphasize the importance of early suspicion, diagnosis and treatment of cancer. Each of the more deadly sites, such as the stomach, breast, large bowel, cervix and lung, are discussed. The succeeding five films in the series will give more detailed treatment to the specific body sites.

Sponsored by the American Cancer Society and the National Cancer Institute of the U. S. Public Health Service, the 16 mm., one-reel film is procurable on loan for single showings from state cancer societies offices, state health departments, and from the regional offices of Association Films. It is procurable on purchase for \$150 from Audio Productions, Inc., 630 Ninth Ave., New York 19, N. Y.

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THE NEW A.M.A. PUBLIC RELATIONS PROGRAM

Lawrence W. Rember, Director of Public Relations, American Medical Association

Much has been said in the press and on the air about the new A.M.A. public relations program. Some facts have been seen and some facts have been heard. But infinitely more ink has been spilled and considerably greater wind has been expelled over what are sheer assumptions, plain misstatements, or just deliberate falsehoods. Since I am from the American Medical Association, let me give you the facts about our newly launched National Education Campaign as I see them.

Let's set the record straight on the subject of lobbying and the smear attack that has been launched against the A.M.A. in that connection. The charge has been made by the advocates of compulsory health insurance that the American Medical Association plans to invade Washington with a high powered lobby and a \$3,000,000 "slush fund" in an effort to block passage of the legislation in Congress. That charge is absolutely false, and your state and county medical societies, and every one of your doctors who value the good name of medicine will see to it, I'm sure, that this smear attack is branded as false in every community in Iowa in which it has taken hold.

The Washington office of the A.M.A. is one of the most modest legislative offices maintained by any of the national associations in the Capitol and is headed by a man of unquestioned integrity, Dr. Joe Lawrence, who is highly respected in Congress. Dr. Lawrence is ably assisted by two other M.D.'s and a small staff of a necessary Capitol legman and three secretaries.

The headquarters' office of Whitaker and Baxter is in Chicago. This is the primary base of operations for that portion of the new A.M.A. public relations program which is being directed

by Clem Whitaker and Leone Baxter and which comes under the policy control of the Coordinating Committee. This committee, as you know, was created by the House of Delegates and consists of three delegates, four trustees, and three officers of the American Medical Association.

One North La Salle street in Chicago will be the Pentagon building of medicine's crusade for freedom, not a marble office in Washington, D. C. From Chicago will come the tide of blueprints, maps, pamphlets, talks, scripts, news releases, articles, posters, resolutions, cartoons, folders, letters, mats, and other materials which will carry medicine's case to the people of America in a grass roots campaign which we hope, with your help, and the help of tens of thousands of others, will reach every corner of this country. The success of this campaign, in the final analysis, will depend on whether it reaches below the national level—down to the grass roots—in every state and county and city in America.

This should convince you, henceforth, that the American Medical Association isn't embarking on any high pressure lobbying campaign in Washington, nor is there any "slush fund." The socializers in the Office of Social Security, who have used their government facilities and government funds to lobby Congress, are simply sending up a smoke screen against A.M.A. as a cover for their own highly questionable operations, and the people need to be told that.

One of the greatest rights that we have as a free people is the right of petition, and we intend to exercise that right, even though Oscar Ewing and his socializing satellites will do everything in their power to keep us from getting our story to the people. The American people, not Congress, will decide this issue in the final showdown, and Mr. Ewing knows that. That is why he fears the National Education Campaign which the A.M.A. has authorized and that is why he will do his utmost to discredit and block us.

The Coordinating Committee, in approving a broad National Education Campaign beamed di-

rectly to the people rather than just to Congress, established two major objectives.

The first objective is the defeat of the compulsory health insurance program in Congress, and there is great urgency in that phase of the problem. The first showdown battles on compulsory health insurance may come sooner than we think. We can't afford to be lulled into overconfidence by reports out of Washington that no serious effort will be made to push through the program at this session of Congress. That may be propaganda emanating directly from the camp of our opponents.

The time schedule of the opening battle in Congress we can't determine. Our opponents have that advantage, and our only safe course, regardless of the conflicting and confusing reports which will emanate from Washington, is to mobilize for all-out action now and be ready whenever the attack comes. We can't call the shots on just how or when the battle will be joined, *but we can and must get American medicine off the defensive and into an affirmative, offensive position. That's an immediate and vital necessity.*

There are going to be no punches pulled in our national publicity campaign, and we want you to know that. We're going to attack and attack and attack until the truth about the vicious consequences of political medicine are known throughout this country. We're going to put the foes of American medicine on trial before the bar of public opinion in this nation and let the people decide for themselves whether they want *men of medicine* or *medicine men* in charge of the health of their families.

We're going to expose the shameful misrepresentation, the juggled facts and garbled statistics, the phony draft rejection figures, and the deliberate attempt of patent-medicine-man Oscar Ewing to hide from the people the true cost and the social consequences of the scheme of socialized medicine which he is proposing. We're going to tell the American people that political medicine is bad medicine; that it is cheap, but cheap only in quality. We're going to tell the American people that the financial cost of political medicine is staggering, too.

We're going to tell the American people that invasion of the individual's privacy is one of the most objectionable features of compulsory health insurance. We're going to tell the American people that the average American, when illness strikes, wants his own doctor, not Dr. Blank. We're going to tell the American people that every American likes to think he's "tops" in his chosen occupation, or at least that he has a chance

to reach the top. And you medical leaders and doctors here in Iowa are going to play a vital part in getting this story told.

Any new proposal for federal compulsory health legislation will undoubtedly be presented to the American public in a manner similar to that which Russia followed in returning the cruiser Milwaukee to the United States a few weeks ago. The ship was a perfect example of "spit and polish" above decks. Russian deckhands had put a new coat of paint on the hull and the masts and the stacks. They had polished up the brass topside until it shone. But down below in the crew's quarters were numerous rats. Mattresses in the quarters were verminous. All movable gear had to be stripped from the ship. We had better see to it that the American people look below decks before they decide to accept any glistening legislative cruiser which the socializers in Washington offer for the protection of the nation's health.

The *second objective* of the National Education Campaign will be an all-out offensive to enroll the American people in voluntary health insurance systems. The A.M.A.'s Coordinating Committee has authorized and directed Whitaker and Baxter's command to conduct a nationwide drive to make America health insurance conscious and to work with the prepaid medical plans, the prepaid hospital plans, the accident and health insurance companies, and all other sound groups in the voluntary field to achieve this objective.

This is an affirmative campaign, and not just a negative campaign, and I think we need to hammer home that basic point in every public appearance. We're not just working to beat a bill. We're going to work together to resolve a problem. We're going to do something about taking the economic shock out of illness. Preliminary meetings have already been held with representatives of the medical care plans and the private insurance companies to pledge to them the A.M.A.'s vigorous assistance in promoting voluntary health insurance and to enlist their aid, if possible, in stepped-up selling and advertising campaigns.

The accent in this campaign is going to be on the positive. We are going to do everything in our power to acquaint the American people with the desirability and the availability of prepaid, budget-basis medical care. We believe in voluntary health insurance, not just as a political expedient, but as a sound development in medical economics. We want everybody in the health insurance field selling insurance during the next two years as he has never sold it before, knowing that he has the prestige of the American Medical

Association, and all its power and facilities squarely behind him. And we are going to ask the doctors, when they are talking to patients who are in need of budget-basis medicine, to take time to encourage them to enroll in a good sound voluntary health system. That's a fundamental part of the A.M.A. program, and I hope all of you will lend your influence to promoting voluntary health prepayment enrollment.

We are not going to ask the doctors to achieve these two objectives, of defeating compulsory health insurance and promoting voluntary health insurance, with bare hands. We will not only "praise the Lord," but also "pass the ammunition." We'll provide the bullets so you can fire them. Well, the bullets are on their way. A simplified blueprint of the campaign against compulsory health insurance, national, state, and county, has been sent to every state medical society across the nation.

The job at national headquarters calls for *eight* basic activities.

The first is to develop and direct national planning and campaign strategy.

The second is to direct the national publicity campaign. The purpose here will be to reach the opinion leaders who in turn influence a majority of the general public. The flow of facts and ideas and motivations favorable to medicine's and America's cause will be through newspapers, magazines, house organs, radio stations, television stations, trade papers, newsletters, and other communication media.

The third national job is to direct the national-organization endorsement drive. Among those already on record are the American Farm Bureau Federation, the American Legion, the Twenty-Third Women's Patriotic Conference on National Defense, the American Hospital Association, and the American Bar Association.

The fourth is national coordination of the work in the 48 states. Mr. Frank Nisja has been employed recently by Whitaker and Baxter to conduct this activity.

The fifth is to produce all basic campaign literature and materials, including posters, pamphlets, leaflets, reprints, form resolutions, form speeches, cartoon mats, publicity which can be adapted for state use, lists of organizations, conventions, and so forth. This is one of the biggest and most urgent jobs in national headquarters, and the materials will start to flow to the states just as fast as copy writers, artists, engravers and printers can turn out finished products. Press runs of pamphlets and other materials are ex-

pected to total 100 million copies during the first 12 months of the campaign.

The sixth is to organize and direct a national speakers bureau to cover top-assignment speaking engagements. A number of medical leaders, and lay leaders as well, will be selected to perform this vital task on national radio programs and at national conventions and meetings.

The seventh is to direct a national women's campaign. Miss Mary McGinn of Whitaker and Baxter is heading this division to secure the support of the major women's organizations and to arouse women throughout the nation to the threat of political medicine.

The eighth I have referred to earlier. It is to cooperate with the prepaid medical and hospital plans and the accident and health insurance companies in an all-out drive to provide the American people with voluntary systems.

This spotlights in brief the job at national headquarters in support of the National Education Campaign. Having learned about the major campaign activities which your state medical society is planning and conducting to mesh with the national activities and the activities of all other constituent and component societies of the A.M.A. in this all-out fight to preserve medicine's freedom, I might say here that your state is particularly well organized and most ably led and staffed for winning the battle on the Iowa front. In fact, you are setting the pace of a General Patton, and from what I have seen there will be no stopping you until you reach the Potomac. Your councilors, your president, campaign chairman Dr. Wayland Hicks, the chairmen and members of your public relations and legislative committees, your other allied committees, your headquarters staff personnel, and your own county corps place the Iowa army in line for a Congressional Medal.

Two other important phases of the new A.M.A. public relations program remain to be discussed. Wisely, the trustees and officers of the American Medical Association are not depending upon the National Education Campaign alone to put a permanent stop to the agitation for compulsory health insurance and the other frills promised by the socializers in the Federal Security Administration and their perennial friends in Congress.

The 12 point program announced recently by the trustees of the A.M.A. has won wide editorial support in the nation's newspapers and in comments by many of the nation's opinion leaders. Briefly, this program calls for:

1. Create a Federal Department of Health, with an M.D. as its secretary.
2. Establish a National Science Foundation.

3. Provide grants-in-aid for states to enroll indigents in voluntary prepayment plans.

4. Set up a joint doctor-lay authority in each state to receive and spend federal or other funds.

5. Expand the Hill-Burton Hospital Construction Act.

6. Create public health units in areas now lacking them.

7. Develop a new mental hygiene program, with grants-in-aid to clinics.

8. Stimulate health education.

9. Provide facilities for care of the chronically ill and the aged.

10. Coordinate V.A. medicine functions with other Government and private programs.

11. Put greater emphasis on industrial medicine and accident prevention.

12. Provide federal aid for medical education, free from political control.

A goodly amount of the \$3,000,000 income from the \$25 assessment will be used for the purpose of implementing this positive, constructive program of the medical profession. For example, \$25,000 has been made available for the setting up of a Commission on Chronic Illness. This Commission has as its vice chairman, Dr. James R. Miller, trustee of the American Medical Association. Other sponsoring member organizations are the American Hospital Association, American Public Health Association, and American Public Welfare Association. Commission offices will be at A.M.A. headquarters.

Some of the income will be made available also for other positive purposes in the promotion of the profession's welfare. The public must be made increasingly aware of the contributions which the day-in, day-out work of the councils, bureaus, and committees of your A.M.A. makes to America's well-being and health advancement. Our department of public relations, working in fullest and closest cooperation with all departments at national headquarters and with state societies, will broadcast and reiterate this story many times during this year.

One vehicle will be a film that will portray and dramatize the contribution to America's health of one day's activities of the A.M.A. This film originated with the Board of Trustees and was approved by it in February. It will be produced by Louis du Rochemont Studios, former producer of "March of Time" and such famous documentary films as "Boomerang" and the "House on 92nd Street." He is also producer of *Readers Digest* films which are to be shown in 7,000 theatres. Its cost of between \$70,000 and \$100,000 gives you some idea of its high quality. Running time

for the film will be 23 minutes, and it will be made available to state and county societies and individual doctors in 35 mm. and 16 mm. sizes. It is scheduled for completion in six months.

Another vehicle will be an enlargement of staff personnel at 535 in effecting these new assignments and responsibilities.

The PR Doctor newsletter and exchange will be issued regularly and supplement the National Education Campaign offensives. This is a service designed especially for the benefit and strengthening of state-medical-association public relations programs.

The second annual National Medical Public Relations Conference is being planned for this fall.

While this is being done, however, it is firmly believed by us that the solid goals of this new A.M.A. public relations program will never be achieved unless every doctor becomes "a doctor of public relations." When a man achieves the honored title of "Doctor of Medicine," that ought to be enough preparation and enough renown to enable him to carry on successfully in his practice and in his profession. Today's American society, however, demands something more of him. To his M.D. degree, he must add another, the degree of "doctor of public relations." Otherwise, those in control of our government would treat him worse than if he had no education or training at all. They would chain him to a compulsory medical care system and let the street-car conductor, bus driver and plumber go scot-free in their bad public relations. That is because laboring people control more votes and can therefore get by, ignoring, insulting, and displeasing the public. That is the unfair price which we have to pay, because we, like some other whipping boys, are a minority group.

There is another angle, too, why every doctor needs to strive to earn the degree of "doctor of public relations." I am convinced in my own mind that the superb plan of battle which has been outlined by Clem Whitaker and Leone Baxter will defeat successfully the threat of compulsory health legislation being passed by this Congress. But from a long term point of view, this merely holds the enemy at bay. The only way to eliminate him is to take away his weapons. What are *his* weapons?

His warplanes are the night calls, the emergency calls, that are never answered.

His tanks are the high fees which are out of line and unjustified and which most people simply cannot afford to pay.

His submarines are the rebates which are hid-

den kickbacks from referrals and the sale of glasses, appliances, and drugs.

His artillery are the refusals to meet with and to work with lay groups in solving community health problems.

His hand grenades are the representatives of the newspapers and other media who are brushed off and treated with contempt or anger.

His rifles are the lack of a personal interest in the patient and the withholding of desired information from the patient.

His warships are the failure to tell about the mighty progress and the miracle achievements of voluntary medicine and its program for ever greater accomplishment.

His saboteurs are the doctors who attack the profession publicly, instead of constructively and privately correcting its ills.

His mines are those doctors who do not get behind the positive objectives of county society, state association, and national organization programs.

These weapons, as all of you know, will be gradually eliminated from the enemy by the expanding disarmament public relations programs of the state medical associations and the American Medical Association. The faster we can step up this process, the sooner we will achieve our peace objective.

In all of this new public relations activity, the welfare of our country, as well as the welfare of the medical profession, is directly at issue. This may well be the most momentous struggle of free men against government domination which will be fought out before the American people in our generation. The responsibility is tremendous; the work involved for many of us will be nerve wracking, and, in many instances, it may even seem thankless. But let's lift our sights to the horizon. This, without doubt, is the greatest opportunity any of us ever will have to play a vital role in determining the destiny of American medicine, and even more important, the destiny of the American people.

Only recently, the Associated Press reported from London that all discussion had ended on the Labor government's bill to take over the iron and steel industry and that it is being sent back for a final vote. The bill already has passed its second reading, which amounts to approval in principle. Soon other fronts of freedom will fall.

We all know the history of what has happened elsewhere when the socializers take over. When medicine goes down, it's the beginning of the end. In this dear land of ours, we must not let this happen.

ROSEOLA INFANTUM (Exanthem Subitum)

Lee Forrest Hill, M.D., Des Moines

Roseola infantum, exanthem subitum, or Zahorsky's-disease as it is sometimes called, is not an important disease among the mortality and morbidity statistics of children. And yet it has many interesting features. It can give the physician who is not familiar with its peculiarities a most uncomfortable three or four days. Not too much has appeared about it in the literature, and hence the condition may have escaped the attention of some physicians. An analysis of 38 cases that have been seen at the Raymond Blank Memorial Hospital for Children from June 1946 to March 1949, forms the basis of this report.

Zahorsky,¹ in 1910, was the first to insist that roseola infantilis, as he called it at that time, was a distinct clinical entity. Three years later, in 1913,² he suggested the term roseola infantum—rose rash of infants—and gave case histories of some 33 patients. His original description of the clinical manifestations is as applicable today as when he wrote it some 40 years ago. Wrote Zahorsky, “. . . the patient is almost always a child under three years of age who suddenly becomes ill with a high fever. The physician is called and on examination of the patient finds nothing to account for the fever. The fever continues but no diagnosis can be made on the second, third, or even the fourth day. Then the temperature drops to normal, or nearly so, and the child, who has been drowsy and irritable, sits up and commences to play. Coincident with the decline in the temperature, a morbilliform rash appears on the face and neck and rapidly spreads over the body. The eruption disappears in 24 to 48 hours. There are no complications or sequelae. No desquamation follows the disappearance of the rash.”

In 1921, Veeder and Hempelmann³ described the same disease under the name “exanthem subitum,” calling attention to the sudden appearance of the rash. They also receive the credit for being the first to point out a second and diagnostic feature of the malady, namely, leukopenia and lymphocytosis.

Up to the present, no proven etiology has been established for roseola infantum, although most observers are in agreement that the probable cause is a virus of low virulence. But, if it is an infectious disease, its degree of contagiousness is certainly at a low level. In over 28 years of

pediatric practice, I have encountered only one instance in which a second child in a family developed the illness following exposure to a sibling. In this instance, the incubation period was approximately one week. I have never observed a second case occurring in our hospital wards. However, Cushing,⁴ and Barenberg and Greenspan⁵ describe epidemics in institutions which settle the problem of contagiousness beyond question.

Another arresting feature of roseola is its almost complete restriction to the age period of the first three years of life. Only occasional cases have been reported after the age of four. Reference is made in the literature to an 18 year old girl and a 31 year old woman having had the disease. Cushing, in speculating on this point, suggests that perhaps the same infection occurs in older persons, but with the difference that they do not react as do infants.

Table 1. *Seasonable Distribution*

	No. of Cases	Percent
January	9	23
February	6	16
March	6	16
April	5	13
May	0	0
June	11	29
July	1	3
August, September, October, November, December	0	0

Nor does roseola behave epidemiologically like other well-known communicable diseases such as red measles and German measles. The latter occur in the familiar wavelike patterns characteristic of epidemics. Roseola, on the other hand, occurs endemically at about the same rate year after year. There is evidence of some seasonal variation as shown in Table 1 in the analysis of our 38 cases. Other observers, however, have reported no such seasonal variation. In private practice, roseola infantum is of common occurrence. It is far more common than scarlet fever or German measles, but less prevalent than red measles, particularly in epidemic years of the latter.

The chief confusion in the diagnosis of roseola arises from its resemblance to measles. In fact, measles is the usual diagnosis made by those who are not acquainted with the peculiarities of Zahorsky's disease. When parents make the statement that a child has had measles three times, one can be fairly sure that one of the illnesses was roseola, since a high degree of permanent immunity follows both rubella and rubeola. Little difficulty should be experienced, however, if one bears in mind the distinguishing features of each. In rubeola, the rash makes its appearance at the height of the fever, and the fever subsides only

when the rash has reached its full stage of efflorescence. The morbilliform rash on the palate and the Koplik spots on the buccal mucous membrane, characteristic of measles, are not present in roseola infantum. German measles is not preceded by the three or four days of fever that is seen in roseola, nor do the posterior cervical glands become enlarged as regularly occurs in rubella. It must be admitted that roseola bears more resemblance to German measles than it does to measles. In fact, in the discussion following one of Zahorsky's early papers, one of the discussors maintained that roseola was simply a variant of rubella and should not be accorded recognition as a separate entity.

Table 2. *Age and Sex Distribution*

	No. of Cases	Percent
Males	22	58
Females	16	42
Under 12 months	18	47
Between 12 and 24 months	18	47
Over 24 months	2	6

Table 2 shows the sex distribution in our series of cases. It will be seen that there is no special predilection in favor of either sex, 22 of the cases occurring in boys and 16 in girls. This is in agreement with the reports of other series. Only 2 of the 38 cases occurred in children over two years of age. An equal number occurred in the age period under one year and from one to two years. The youngest patient was 4 months old and the oldest was 2½ years, which supports Zahorsky's original statement that the disease occurs almost exclusively in the first three years of life.

Table 3. *Leukopenia and Lymphocytosis*

	No. of Cases	Percent
W.B.C. under 2,000	0	0
W.B.C. between 2,000-5,000	10	26
W.B.C. between 5,000-10,000	26	68
W.B.C. over 10,000	2	6
Lymphocytes under 50%	20	52
Lymphocytes between 50% and 70%	12	32
Lymphocytes over 70%	6	16

The blood counts recorded in this series of cases are not of much value in illustrating the true picture of leukopenia and lymphocytosis pointed out by Veeder and Hempelmann. There is evidence that there is a progressive fall in the total leukocyte count and a progressive rise in the percentage of lymphocytes from the onset of fever through the rash stage. In order to obtain an accurate record of the maximum leukopenia and lymphocytosis, daily counts would have to be made throughout the course of the disease and afterwards until the normal relationship returned.

In most of our cases, only one count was re-

corded, and no attempt was made to relate the day the count was taken to the day of the disease. In general, as seen in Table 3, the majority of the white blood counts were below 10,000. Only two were above this figure. Six of the patients had a lymphocytosis of over 70 per cent and 12 were between 50 per cent and 70 per cent. The remaining 18 cases were under 50 per cent, but it is altogether probable that these represent the cases which had initial counts taken early in the course of the disease.

Table 4. Symptoms and Physical Findings

	No. of Cases	Percent
Fever	38	100
Convulsions	8	21
Without Convulsions	30	79
Respiratory Signs and Symptoms:		
Cough, tonsillitis, pharyngitis, otitis media, cervical adenitis	38	100
Gastro-Intestinal Signs and Symptoms:		
Vomiting	5	13
Vomiting and diarrhea	2	6
Diarrhea	1	3

All 38 of our cases had recorded in the initial physical examinations that there was some evidence of inflammation about the upper respiratory tract (Table 4). Findings included coryza, tonsillitis or pharyngitis, otitis media, cervical adenitis and bronchitis. Until a blood count was obtained, such findings were usually accepted as being the probable cause of the fever. Zahorsky maintains that signs and symptoms of a respiratory tract infection are not a part of the picture of roseola infantum and that, when the two do occur concomitantly, it is merely the result of chance, since both diseases tend to occur during the months when colds are frequent. Later writers, however, have been pretty much in agreement that minor evidences of nose and throat inflammation definitely belong to the symptomatology of roseola, for the reason that such symptoms disappear promptly following the subsidence of the rash.

Involvement of the intestinal tract is relatively uncommon. Vomiting occurred in only 5 of our cases; vomiting and diarrhea together in only 2; and diarrhea alone in only 1 case. Convulsions, on the other hand, occurred with considerable frequency, 8 or 21 per cent of our group manifesting this complication. In fact, the reason for the admission to the hospital for all 8 of these cases was the occurrence of a convulsion in the home shortly after the initial rise in temperature. No other complications occurred in any of the 38 infants comprising this group.

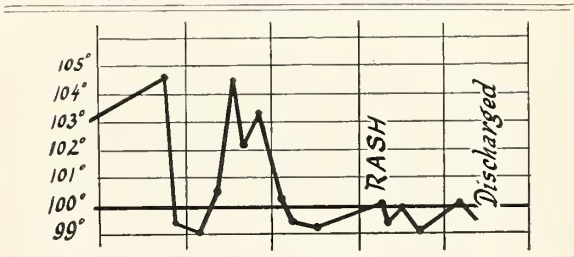
Table 5 indicates the range of fever that may be expected in this disorder. It is out of all proportion to the degree of illness manifested by the patient. Irritability and anorexia are the rule,

Table 5. Range and Duration of Fever

	No. of Cases	Percent
Fever below 104° (Rectal)	10	26
Fever over 104° (Rectal)	28	74
Highest fever recorded (Rectal)	107°	
Rash appeared after 2 days of fever	2	6
Rash appeared after 3 days of fever	11	29
Rash appeared after 4 days of fever	15	39
Rash appeared after 5 days of fever	10	26

but signs of severe toxicity are conspicuously absent. Many sit up in bed and play with toys or, if at home, demand to be up and about, even though the thermometer records a fever of 103 to 104 degrees. Twenty-eight of the 38 patients had rectal temperature readings of 104 degrees or over. Several were above 106 and one child reached the high peak of 107.

Table 6. Fever Chart in Roseola Infantum



The duration of the preliminary fever before the rash appeared was somewhat variable. In two cases, it was after only two days of fever, in 11 cases after three days of fever, in 15 cases after four days of fever, and in 10 cases after five days of fever. No cases were observed in which the fever ran longer than five days. In most instances, the rash did not appear until the fever had been normal for at least 24 hours, but there were exceptions. Occasionally, the rash began to appear while the fever was subsiding, but before it had reached normal. The degree of breaking-out is also quite variable. It always appears suddenly, being most marked on the trunk and neck, later spreading to the face and extremities, but seldom going below the knees and elbows. It disappears in 48 hours.

In summary, attention has been called to a rather strange disease entity—strange because it appears suddenly out of the blue, most often in infants who have had no known exposure to any kind of illness. It is characterized by a high fever which runs from two to five days. Physical findings and symptoms are mild or absent. Subsidence of the fever is followed in a few hours by a measles-like rash which disappears in 24 to 48 hours. Second cases in homes or in institutions are rare but have occurred. Diagnosis may be suspected during the course of the disease by the finding of a leukopenia with relative lympho-

cytosis. A virus etiology is suspected, but this has not as yet been proven. Convulsions are of common occurrence and are in all probability of the febrile type. Complications are rare. Roseola infantum is commonly diagnosed as measles, but it is readily separated from German measles and ordinary measles if the distinguishing features of all three diseases are kept in mind.

Finally, the disease occurs almost exclusively in the first three to four years of life, with only rare cases occurring in later years. No explanation for this phenomenon has been demonstrated as yet.

An analysis is presented of 38 cases of roseola infantum occurring at the Raymond Blank Memorial Hospital for Children between June 1946 and March 1949.

BIBLIOGRAPHY

1. Zahorsky, J.: Roseola Infantilis. *Pediatrics*, xxii:60-64 (January) 1910.
2. Zahorsky, J.: Roseola Infantum. *J.A.M.A.*, lxi:1446-1450 (Oct. 18) 1913.
3. Veeder, B. S., and Hempelmann, T. C.: A febrile exanthem occurring in childhood (exanthem subitum). *J.A.M.A.*, lxxvii: 1787 (Dec. 3) 1921.
4. Cushing, H. B.: Epidemic of roseola infantum. *Canad. M.A.J.*, xvii:905-906 (August) 1927.
5. Barenberg, Louis H., and Greenspan, Leon: Exanthema Subitum (Roseola Infantum). *Am. J. Dis. Child.*, lxxviii:983 (November) 1939.

THE FOOD AND DRUG ACT

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During the development of the drug therapy field and allied fields in this country, there have arisen certain problems that have affected the medical profession and the people that the medical profession treats. As a result, laws have been devised to overcome them, in part.

The laws, while intended to work to the benefit of the general population and the medical profession, at first glance may seem to provide also certain hindrances. One of these laws that today works to the benefit of the public and the medical profession, but that at the same time raises certain unique problems, is the Federal Food, Drug and Cosmetic Act. Briefly, by way of review, so that we may understand the reason for this act and its effects on medical practice, let us recall that at the turn of the century there was no law in this country that would prevent an unscrupulous individual from marketing something that could kill or at least have no beneficial effect upon people.

Those who were in practice 30 or 40 years ago will well recall some of the peculiar accidents

that occurred and some of the tragedies that followed the use of some drugs that were freely sold.

In 1905 considerable effort was expended in this country to pass what was known as the Food and Drug Law, but it was impossible to get the necessary sympathy for adoption of the bill until Theodore Roosevelt finally decided that a law should be passed; as a result, one was passed practically overnight, but only after it had been proposed and supported by the American Medical Association and certain lay journals, including *Collier's*.

That law which was passed had possibilities, but, unfortunately, in 1912 it was emasculated by what was known as the Shirley Amendment, an amendment which made it practically impossible for the regulating agency to successfully initiate an action against someone who prepared a dangerous or useless drug, because it made it compulsory for the courts to prove that the person who put out this dangerous drug did so knowingly, deliberately, or with every intent of causing harm. Of course, anyone could say that he did not know that this drug would cause harm, or he could simply plead that he was not experienced in that field and therefore could not be accused of such thoughts or actions. As a result, there was no really effective law until about 1938.

In the middle thirties, there occurred the well-known elixir of sulfanilamide tragedy, which caused the death of many individuals. Over 100 people in this country died because an elixir of sulfanilamide was placed on the market without proper testing before being released for sale.

Overnight, of course, sufficient sympathy was evoked to support a drug-controlling bill which had been before Congress something like 80-odd times and which, incidentally, had originally been proposed by Senator Copeland, who was a homeopathic physician. This bill was finally passed. It became effective in October 1940, although it was passed in 1938, and is known as the Federal Food, Drug and Cosmetic Act.

This Federal Food, Drug and Cosmetic Act regulates drugs in interstate commerce, but it also to some extent indirectly regulates medical practice. This statement is made with possibility for debate, because under the law there is no regulation of medical practice *per se*. Nevertheless, there is definite regulation of physicians' prescribing habits, and especially of the individuals who dispense their own medicines.

Pharmacists and drug manufacturers must obey all the provisions of the Federal Food, Drug and Cosmetic Act and some newer interpretations

which are laid down from day to day by the courts. Also, the physician who dispenses his medicine must meet the provisions of the act, even though he professes never to have heard of the Federal Food, Drug and Cosmetic Act. For example, the physician who dispenses drugs must place on the labels certain warning statements which are required by the Food and Drug Administration, just as the pharmacist must do, or the drug manufacturer who sells directly to ordinary outlets. The physician also must be cognizant of the fact that a verbal order cannot be recognized for a prescription drug or a refill, so far as the pharmacist is concerned. In other words, the physician today must reduce his prescription to writing.

Years ago the average physician could call his corner pharmacist and say, "Give Mrs. Jones so many tablets of so-and-so. She will be in your store in a few minutes." Or he could simply give a prescription even orally to his patient, and it could be refilled indefinitely by the pharmacist.

Within the last few months, in fact, within the last few weeks, there have been laid down certain court decisions—and, after all, we only know how a law works after a court decision has been made. These court decisions are being used to prohibit pharmacists from refilling prescriptions unless specifically directed to do so by the physician.

Pharmacists are also prohibited from releasing any material if it bears an Rx legend, which normally appears on the outside of the package "to be dispensed by or on the prescription of a physician" or dentist or veterinarian, as the case may be. If this statement is on a drug package, the pharmacist cannot release the drug on oral prescription, unless he wishes to take full responsibility for so doing.

It is not unusual for a physician to inform a pharmacist that Mrs. Jones, for example, will be in to get some drug and that a prescription will be along later. However, the pharmacist now must decide whether or not he wishes to obey that oral order, realizing that to do so may bring court action.

It is argued that a prescription is a specific and definitely limiting order, whether it is written or oral, and, if the pharmacist does not conform to the law and obtain a prescription for an Rx drug, he is violating the law and is subject to prosecution. Furthermore, there is even a possibility that the physician is equally subject to legal action if he dispenses drugs improperly, although so far there have been no such test cases

for physicians. Perhaps, however, the day will arrive when a physician will be involved in a test case to see whether or not the Federal Food, Drug and Cosmetic Act has the same possibilities for the physician as it does for the pharmacist and all others who are interested in the interstate commerce of drugs and in their dispensing or use.

So, it seems not unlikely that in the near future the physician will face further restrictions on habits to which he has long been accustomed. This is not intended as a derogatory statement towards the Federal Food, Drug and Cosmetic Act, because it has many advantages; however, the physician will be hampered, so to speak, in his prescribing of drugs if he uses as a basis for comparison the older and rather free methods of dispensing and ordering and prescribing which were common not so many years ago.

By way of summary of the few comments that have been offered so far, the physician today cannot orally prescribe a drug that is a prescription item, unless he immediately follows that order with a written prescription, so the pharmacist may have it in his files. The pharmacist, if he wishes, can refuse to fill an oral order, because he knows full well he is accountable to the law if he does fill it but has no written prescription for his files.

A second point that is worthy of emphasis is that the pharmacist cannot refill a prescription today unless there is a specific order from the physician to refill it. So, the physician must write on his prescription the number of times it is to be refilled, or write the number of tablets that are to be used and the number of weekly intervals that the prescription may be returned to the pharmacist by the patient.

If those orders are not on the prescription, the pharmacist can only fill the prescription once, because the law regards the written prescription as a specific and self-limiting order. If it *apparently* is an order for one filling, then, according to the law, it is an order for only one filling.

A third point is concerned with a law which has nothing to do with the Federal Food, Drug and Cosmetic Act but still relates to drugs. It involves drugs that come within the purview of the Harrison Narcotic Act. No such drug can be released without a written prescription; phone orders cannot be filled except in emergencies; and such prescriptions cannot be refilled.

Thus, new problems for the physician are raised from month to month and year to year, simply because new controls are being exerted for the protection of the general population and, indi-

rectly, in some instances for the protection of the physician.

The act that was passed by Congress in 1938 was never intended to regulate medical practice or the habits of physicians. It was intended to provide safety for the general population, but, as we all know, when a federal act is enforced, it is inevitable that the control sometimes goes beyond what was originally contemplated.

It is impossible for us to see into the future. We never know exactly what is going to happen when an act is passed, and we never know, of course, what interpretations may be placed upon the provisions of an act until court decisions have been handed down. We also know that it is easier to enact a law than to remove it from the records. The same is true of court decisions.

I would like to make it clear that this is no criticism of any particular act that we may be discussing or have in mind. I merely would like to emphasize in every possible way the provisions of this act, because today the medical profession is much concerned with these provisions of the Federal Food, Drug and Cosmetic Act, as it is with other acts, for example, the Harrison Narcotic Act.

Therefore, it behooves every physician who prescribes or dispenses to be fully aware of the provisions of this act, because there is a possibility that some time in the near future, or perhaps at a later date, there will be a test case in which a physician is involved.

So far, only drug manufacturers and pharmacists have been involved in the test cases that have been used or set forth by the courts to determine how far the Federal Food, Drug and Cosmetic Act may go in regulating the interstate commerce of drugs. But when a physician orders a drug, he must cope with certain provisions of the act, and, if he dispenses, he probably must act just the same way that a pharmacist does, and he must make certain that the drugs he dispenses bear certain directions as advocated by the law.

There are times when the Food and Drug Administration sets forth statements which may seem confusing until we become familiar with them. For example, three or four years ago there was introduced in this country a drug known as thiouracil, a drug that was made available for its effect on the thyroid gland. It was offered as a treatment measure, usually when it was impossible to resort to surgery.

It had dangerous possibilities. It could kill people. But, nevertheless, it had some degree of usefulness, and it seemed that its usefulness out-

weighed its harmfulness. So it was released, but, when it was released, the Food and Drug Administration required the pharmacist to place on the label of this particular dispensed package a warning which, in effect, told the reader that, if he got a sore throat and had certain other signs and symptoms, it probably was due to the effect of the drug and to immediately report to the physician.

Obviously, the pharmacists were against this, and so were many physicians, because they felt that this would, in effect, scare the patient. The average hyperthyroid patient is irritable enough, without being faced with these additional warnings.

Finally, after a considerable number of conferences, a warning was evolved which seemed to meet the requirements of the act and which would not unduly frighten the patient, and it was agreed upon by representatives of the Food and Drug Administration, the medical profession, and the pharmacy profession that this label would be satisfactory to all parties concerned.

At that time, we were informed, all of us, that there would be no such label placed on any other drug, that this was just for thiouracil, because it was a unique compound.

However, just about the time that thiouracil was coming into general use, a substance known as propylthiouracil was developed which did not have the same degree of harmfulness but had at least the same possibility of usefulness. Nevertheless, the same type of warning label was demanded for this drug by the Administration, and more recently pentaquine, an antimalarial substance, has been released with the same type of warning. So it would appear that a precedent has been established whereby in the future certain drugs that will be placed in interstate commerce must bear, in spite of what the physician may wish, a warning, a warning which may possibly frighten the patient.

Therefore it is necessary for the physician to be fully aware of these warnings and of the possibilities behind the placing of them on the package, so that he can prepare the patient mentally for the warning that he will read when he buys this dispensed package from the pharmacist. It is no arbitrary action on the part of the pharmacist who places the warning on the label or the label on the package; he is complying with the law. There may be other decisions arising from time to time about which you may wonder. The offices of the American Medical Association will attempt to disseminate pertinent information as quickly as it becomes available—in fact, reprints

are now being prepared so current decisions, as they affect medical practice, can be made available to the profession through the state and county societies. But it would be wise for the profession, if it is not familiar with the laws, to ask either the A.M.A. headquarters or the state or county society offices for the provisions of these various laws that affect medical practice. At times, I think it would be wise also if committees existed representing joint interests of pharmacy and medicine to prepare pamphlets that could be freely distributed to physicians and pharmacists, so there would be a minimum of confusion and irritation, not only among the members of any profession, but between the professions and, certainly, between the professions and the legal agencies that exist in this country.

You may wonder, then, if these laws are so strict, why it is that from time to time we have reports of national tragedies, such as was the case with the elixir of sulfanilamide, although I should hesitate long enough to point out that that accident occurred before the present Food, Drug and Cosmetic Act. However, there are other tragedies, such as recently occurred with the so-called salt substitutes. You may recall the publicity that was circulated and the papers that appeared in *The Journal of the American Medical Association*; certainly many of you heard the radio announcement and saw articles that appeared in the press about the use of compounds containing lithium.

It was known for a long time that lithium was used in carbonated beverages, and it also had been used for a long time in lithium waters as tonics and for many other reasons in the years gone by. However, no one knew that lithium had any toxic possibility, although a report appeared back around 1912 or 1918, which pointed out that lithium was not free of harmful possibility. But still it was used as a salt substitute. There were placed on the market several salt substitutes containing lithium, because these are the only substances that have been developed so far that seem to taste like salt. The others that have been prepared as salt substitutes do not taste like salt and are usually resented by the person who is on a salt-free diet but who still likes to season his food.

Individuals used the material and, as a result, a number of deaths occurred. How many, we will never know, because the conditions which were produced by these salt substitutes were not unlike some of the conditions for which the physician was advocating a salt-restricted diet. But we do know that a number of people have been

killed. We know other people, unquestionably, must have died or their condition made worse.

These substances are now off the market. There is no carbonated beverage on the market at the moment that contains lithium, although there are many bottles that have lithographed on them a statement of ingredients, and included may be lithium. That is simply because many thousands of dollars are tied up in the bottles. These are not to be discarded. But there are no lithium salts in the carbonated beverages.

However, there was a tragedy that occurred in spite of our law. One might ask, why did that happen if we have such stringent laws? Unfortunately, the Federal Food, Drug and Cosmetic Act provides only for safety. Actually, by various indirect methods it has some influence over actions and uses, but that is largely because the Food and Drug Administration and the drug manufacturers usually are able to reach an understanding on labeling. But, so far as the law is concerned, it provides only for the safety of a substance. In other words, a drug as released must be safe when used as directed, which, of course, offers broad possibilities for those who wish to circumvent the law, if only for a short time.

However, that is the law that exists. Therefore, a number of substances may be placed on the market which, according to all tests that have been conducted so far, appear to be safe but which we find after months of use are not harmless. Furthermore, we cannot always be certain when something which today is called a special dietary supplement—which is what these salt substitutes were called some months ago—may tomorrow be called a drug—which is what the salt substitutes are now being called. A few years ago, when these agents were introduced on the market, they were permitted to go into interstate commerce under certain provisions of the act which concern food. Today, none of these substances can be introduced on the market unless they pass what are known as new drug applications. So time moves on and so does our knowledge, but it often results in our laws being modified.

That is the only thing that I would again emphasize at this moment. We never know from month to month when laws may be modified. Because the Federal Food, Drug and Cosmetic Act and its interpretations have great influence on medical practice, either directly or indirectly, it is a wise thing to be fully aware not only of the law but of the possibilities that exist in the

law and the penalties that may be set forth by the courts if there are violations.

As I pointed out before, so far there have been no test cases involving physicians, other than those, of course, who were engaged more in commerce than in medical practice, but it seems not unlikely that some time we may have such a test case. I would like then to extend an invitation to each of you to ask, if you are not fully familiar with the provisions of this law, for a practical interpretation from your own society, or from your headquarters office in Chicago, or from the local pharmacist with whom you may be working closely. At least he can tell you what drugs cannot be released without a written prescription. He can also advise you of the warnings that he is required by law to place on these packages that you prescribe and he dispenses.

Furthermore, if there are some of you who dispense medicines, which unquestionably there must be, then you must be cognizant of the provisions of this law and recognize that unless you meet them some day there is a possibility that you may risk some embarrassment.

DIET IN CANCER

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There is widespread interest in nutrition and tumors, although the greater emphasis has been placed on such aspects as genetics, hormonal influences, viruses, and exposure to specific toxic agents. Nevertheless, since the behavior of living forms can be modified by nutrition in practically all phases of the life cycle, it is only natural that the question should have been raised whether the development of abnormal tissue might also be modified by diet or nutrition of the host. Such a viewpoint probably was the basis for older suggestions regarding the possible effects of dietary differences on tumors. Later, the subject has been studied in animal investigation.

I have attempted to summarize the present day knowledge of the relationships of nutrition to the origin and growth of tumors and to include the pertinent investigations, although some data of significance may have been omitted. There is a voluminous amount of literature on the subject, and, as one investigator put it, "There is a bewildering array of dietary results now at hand." To avoid confusion, the early investigations have been omitted; however, reviews of this extensive

and diversified literature may be found in *The Biochemistry of Malignant Tumors* by Stern and Willheim²³ and *Cancer and Diet* by Hoffman.¹²

There are some statistics that are interesting from a dietary standpoint. Primary carcinoma of the liver accounts for less than 1 per cent of all tumors among the people of the western nations; its incidence in orientals and native Africans is high. In Japan, primary liver cancer ranks third in frequency of all cancer cases; it is equally common in other Asiatic countries, and the frequency among the South African natives is amazingly high. It accounted for 90.5 per cent of all cases of cancer among the Bantu Negroes who were recruited from the native territories or from Portuguese East Africa and employed in the Witwatersrand gold mines. This is perhaps directly related to dietary intake, since, because of poverty, these people are forced to live almost exclusively on the cheapest available carbohydrate, corn "mealie" meal. This food is partly cooked, and in some areas it is supplemented by fermented cow's milk. Meat is a luxury and is eaten only on ceremonial occasions or when sheep or cattle die from disease or starvation. To ascertain the effect of the Bantu diet on the incidence of disease, "mealie" meal and fermented milk were fed to 125 albino rats for a period of two years. Many signs of dietary deficiency were observed, and without exception the animals developed liver lesions which varied from a marked fatty change to multilobular cirrhosis. The similarity between the condition of the experimental animals and that of the underfed human beings was too striking to be ignored. Although parasitic infection, especially with liver flukes, has been mentioned as a possible cause of the high incidence of liver cancer in these people, the evidence also points to diet as a contributing factor.^{15, 22}

Carcinoma of the esophagus in the United States causes approximately 2 per cent of all deaths from cancer. This form of cancer seems to prevail in China where it makes up about one half of all neoplasms of the alimentary tract if tumors of the oral cavity are excluded. A higher incidence of carcinoma of the esophagus is noted in many other countries than in the United States. Rough character of the food, the heavy consumption of strong wines (China), the habit of drinking hot tea (Scotland) have been thought to play a role in the etiology of this form of cancer.³ The high consumption of highly seasoned foods in Mexico has been cited as an etiologic factor in cancer of the esophagus in this country.

In Nordlandet, Norway, where the diet is largely fish, Seagard finds a mortality from gastric

cancer of 74 per cent of the total deaths from cancer. Stevenson, analyzing English statistics, observes that cancer of the alimentary tract from mouth to stomach increases as the social status of the population declines. It has been concluded that this data proves that the causes of these forms of cancer are extrinsic, connected with the dietary habits of the people.⁹

For many years insurance companies have been studying the relationship of various factors to the principal causes of death. Some of these studies throw light on the relationship of body weight to cancer mortality.

A review of six available insurance statistics studies, and one study on dietary habits as they relate to cancer, indicates that individuals who are overweight when past middle age are more likely to die of cancer than are persons of average weight.

A typical study is that of Dublin, who used approximately 192,000 records (1887-1921) of the Union Central Life Insurance Company for an analysis of cancer mortality. In this study, the policyholders, men who had bought insurance at 45 years of age or over, were classified according to weight at issuance of policy. The analysis resulted in the following distribution of cancer mortality with regard to weight.¹¹

WEIGHT AT ISSUANCE OF POLICY	CANCER MORTALITY PER 100,000
25% or more overweight.....	143
15 to 25% overweight	128
5 to 15% overweight	121
Normal weight	111
5 to 15% underweight	114
15 to 50% underweight	95

Before I start reviewing the experimental data, I need to make a few general statements. First, it seems the large variety of tumors, benign and malignant, need not be, and generally are not, affected in the same way by a particular dietary or nutritional factor. In some cases different species of experimental animals are affected in different ways. However, it is possible that many types of tumors may respond to a specific dietary change in a similar manner. It is important not to generalize from the response of a single type of tumor, particularly an uncharacteristic one. It is important to understand this point as far as this report is concerned, since to avoid confusion I have eliminated the details on the type of tumors, studied by the various investigators.

Second, it is important to differentiate between the origin and the growth of spontaneous or induced tumors. The experimental procedure may affect the origin of a tumor—positively, negatively, or not at all—and have the same or another effect on the growth of the tumor.

Third, in the investigations concerned with nutrition the choice of diets becomes an important problem. Should it be commercial (natural) diets or purified (so-called synthetic) diets? Many accept the view that synthetic diets are preferable because more is known about their composition. However, there are some objections, as synthetic diets may give effects quite different from commercial diets, etc.

Fourth, knowledge of the nutrition and intermediary metabolism of normal cells is incomplete; therefore our understanding and evaluation of the effects produced through nutritional and dietary variation on the origin and growth of tumors obviously must be limited.¹¹

Tannenbaum²⁴ reviews his work on the relationship of the role of nutrition and the origin and growth of tumors in mice. Underfeeding or caloric restriction was tried experimentally in regard to the formation of five different types of malignant tumors in mice. All types responded to caloric restriction in the same way. Fewer mice developed tumors. Low caloric diets with varying levels of carbohydrate and low caloric diets with varying levels of fat were used in order to determine their effect upon tumor formation. The level of carbohydrate was not an influencing factor. The fat-enriched low caloric diets resulted in greater tumor formation than diets of the same caloric value with lower fat levels.²¹ The effect of caloric variations on growth of tumors was also studied. Drastic caloric restriction retarded the growth of tumors, but at the same time the body weight of the host diminished.²⁴

Attempts have been made to explain the inhibitory action of caloric restriction on tumor formation. It has been stated that the inhibitory action of caloric restriction on tumor formation is caused by factors general in nature, i.e. a restricted nutritional supply or lack of sufficient nutrients to initiate tumor growth.

Many investigators have studied the effect of fat enrichment of an otherwise normal diet upon the formation of various types of malignant tumors. The results show that the fat-enriched diet is a nutritional modification that may have a diversity of effects depending on the type of tumor. For example, Tannenbaum¹¹ found that fat enrichment of the diets for experimental animals caused the formation of twice as many spontaneous mammary tumors, slight increase in incidence of induced skin tumors, no change in incidence of primary lung adenoma, and inhibition in some cases of the incidence of induced sarcoma.

It has been thought by some individuals that the protein content of the diet and also one par-

ticular amino acid may play an important role in the origin of tumors. The most interesting and extensive investigations concerning amino acids have been made on the effect of diets deficient in either the amino acid cystine or lysine. White, et al.,^{25, 26} observed that mice fed a low cystine diet and those fed a low lysine diet had a much lower incidence of spontaneous mammary tumors. A low cystine diet also inhibited the production of leukemia. It is important to realize, though, that mice on the diets low in the amino acid cystine and also lysine failed to grow normally.²⁷

The higher incidence of liver cancer in areas of the world with low protein diets promoted studies with diet and liver tumors. Butter-yellow can be used to produce liver tumors in mice. Opie¹³ and others have studied the effect of a varying level of protein in diet upon liver tumor production by butter-yellow. In general, the experiments show that the low protein content of the diet was favorable to the production of liver tumors. The threshold of inhibition observed by different workers has differed considerably with increase of the protein content of the diet.

Tannenbaum¹⁶ states that it would appear, tentatively, that variations in level of protein intake, assuming it is high enough to permit normal growth, results in relatively small differences in the formation of many types of tumors. Liver tumors may be an exception to this statement.

Morris¹⁹ states that it is exceedingly difficult as well as hazardous at the present time to fully evaluate the place of vitamins in the origin and growth of cancer. It is nevertheless reasonable to believe that certain essential dietary constituents, including vitamins, are involved in the genesis and growth of tumors.

Vitamin A appears to be involved in a number of physiologic processes which are significant in connection with tumor problems. For example, vitamin A deficiency is followed by severe disturbances of the epithelial tissue, expressed in keratinization and metaplasia. Yet, there isn't a great deal of significant experimental work in this manner. Numerous studies have been made regarding the relationship of the B-complex vitamins and tumors. The results of studies on the relationship of thiamin and cancer have not been very uniform. Some interesting studies have been done on the relationship of the B-complex vitamin riboflavin and cancer. Morris¹⁸ found that, when the host was made extremely deficient in riboflavin, there was noticeable retardation of the growth of the spontaneous mammary tumors. There was no decrease in the average rate of

growth of the tumors in mice partially depleted in riboflavin when the level given was sufficient to maintain body weight of nontumor-bearing adult mice.

Miller¹⁷ and Kensler¹³ and others have found that riboflavin-supplement partially inhibits or retards liver carcinogenesis in rats following ingestion of the azo dyes. Rhoads, et al.,²⁰ postulated the theory that immunity was an expression of the ability to destroy the chemical carcinogens, and they tested the hypothesis in case of butter-yellow. They succeeded in showing that butter-yellow is destroyed in the liver of normal rats and that co-enzyme I is involved in its detoxification. Riboflavin contributes to a critical degree in maintaining the detoxifying action of the liver and thereby prevents neoplasia.

Research on cancer with susceptible mice and rats at Yale University, at the Memorial Hospital in New York, and at the University of Wisconsin, has shown that certain strains of animals characterized by a high incidence of cancer were also characterized by a high requirement of riboflavin. When a high requirement was found, a higher level of intake afforded a marked protection against cancer development.¹⁴ There have been numerous studies on the relationship of niacin and cancer. The studies of the levels of niacin in cancerous tissue show, in general, that cancer cells contain less niacin than normal cells. The earlier studies on the relationship of biotin, a B-complex vitamin, and cancer, showed that cancer cells had a higher biotin level than normal cells. This has not been confirmed in later studies, and the level of biotin in cancer cells has been higher only in special cases.²

Another of the B-complex vitamins, pyridoxine, has been studied. It appears from various studies, as those of Morris,¹⁸ that the pyridoxine level of the diet, if sufficient to permit growth and maintain body weight, has little effect on growth rate of the tumors that have been studied.

Choline, another member of the vitamin B-complex, has been studied in relation to cancer. Copeland, et al.,⁷ and Engel, et al.,⁶ both fed choline deficient diets to experimental animals. Neoplasms appeared in a significant number of the animals on the choline deficient diet, but no such lesions were found in control animals fed the same diet but supplemented with choline chloride. A particular strain of mice found to be sensitive to carcinogenesis as a result of the chronic choline deficiency was found to have an abnormally high requirement for choline. A high level of intake afforded a marked protection against cancer development.¹⁴

Inositol, another of the B-complex vitamins, has been shown by Laszlo^{1a} to inhibit the growth rate of transplanted cancer in mice when injections of inositol were given.

Numerous studies have been conducted on the relationship of folic acid, a B-complex vitamin, and tumors. Leuchtenberger^{1b} and Lewisohn^{1c} both studied the effect of various folic acid preparations on tumors. In general, these preparations had an inhibiting effect on tumor formation and growth. Suguira^{1a} did not obtain the same results when he attempted to repeat the above studies. Apparently the strain of experimental animals used is an influencing factor upon the results as well as many other factors, for example, the injection technic. More experimental data is needed before any conclusions can be drawn regarding folic acid.

I have briefly reviewed the statistics that are significant in relation to diet and cancer as well as the experimental data with animals. Now, I would like to discuss diet and cancer prevention. One cannot make very many definite statements on this subject.

Tannenbaum^{1f} expresses his opinion of the practical significance of this apparent relationship of body weight to cancer incidence shown by statistics. Since the relationship has been shown to be valid in extensive animal experimentation, it appears possible that, by the establishment and maintenance of body weight levels at a minimum compatible with good health, cancer may be prevented in a considerable number of persons in whom it might otherwise develop or, at least, the process might be delayed. Such a regimen is already known to act beneficially in other pathologic conditions such as diabetes, heart disease, and in other degenerative diseases. It would appear that this is another real reason for stressing the importance of attaining and maintaining normal weight.

Drastic restriction of calories, protein, and other nutrients as vitamins have been shown to inhibit tumor formation in many cases in experimental animals. This seems to have little, if any, practical application, as the effects of poor nutrition and inadequate food intake on the whole organism are undesirable and far reaching. There is some evidence that an adequate protein intake may be a factor in preventing tumor formation, especially of the liver.

Avitaminosis, particularly of the B-complex type, may cause lesions which develop into cancer. It is commonly taught that cancer of the oral cavity is preceded by degenerative changes in the oral mucous membrane which are recognized as

being precancerous. Some of the precancerous conditions in the tongue are leukoplakia, subacute or chronic inflammation, atrophy or hypertrophy of the papillae. The question arises whether or not the oral and pharyngeal symptoms of chronic riboflavin and nicotinic acid deficiency are precancerous. Pain or burning of the tongue and degenerative changes in the papillae of this organ are common in riboflavin and nicotinic acid deficiency, and the condition often progresses to scrotal tongue. Inflammatory hyperemia occurs in the tongue in riboflavin deficiency. Leukoplakia has been observed in patients suffering from vitamin B complex deficiency. The question arises, if these conditions become chronic, do they become precancerous? More cases need to be studied before one can say definitely whether the connection is causative or coincidental.³ Martin and Kroup¹⁶ believe that the intra-oral lesions of riboflavin and nicotinic acid deficiency are more common and of more importance than the other chronic irritants combined as precancerous factors, although they are unable to give statistic proof of this.

Many investigators believe that the nutrients, especially the vitamins, play a role in the various protective mechanisms of the body and that a marginal deficit may weaken these protective mechanisms and allow neoplastic growth. It has been shown in experimental animals that riboflavin contributes to the mechanism that destroys chemical carcinogens in the liver.

It would seem, in view of the experimental data at the present time, that an adequate vitamin intake is most desirable, especially of the B-complex vitamins, riboflavin and choline.

Once a tumor has developed, Tannenbaum^{1f} concludes that at present there are no nutritive components known which alone, or combined with others, have sufficient selectivity to affect the growth of a tumor in a practical useful way. The conclusion on the relationship of body weight and cancer holds only in the origin or formation of tumors and not in the treatment of cancer once it has developed. Animal experimentation has shown that underfeeding may cause tumors to stop growing or even regress, but, from present evidence, it seems that the animals so treated do not live any longer, on the average, than controls on a full diet. Moreover, it is known from human experience that cancer runs its course regardless of diabetes, starvation, or loss of weight, and that it regresses under such conditions only in rare instances. It appears that once a tumor has formed it is largely subject to the same factors as those influencing growth and maintenance.

It seems at the present time that a diet intake

for the greatest comfort of the cancer patient should be the rule for dietary treatment. Patients with cancer of the gastro-intestinal tract need a great deal of instruction in how the diet can be modified to meet their needs, as this is one of the things that will add to their comfort. Palatability, variety, padding and attractiveness in service play an important role for all cancer patients, as anorexia often accompanies this condition. The way the food is prepared and served can do a great deal in stimulating or further depressing a poor appetite. This is true not only in cancer cases but in many other disorders that are accompanied by anorexia. It is extremely important that the cancer patients have an adequate diet, so their body will not suffer from malnutrition. The caloric intake may need to be increased. The patient may have excess loss of proteins from the body because of hemorrhaging, exudation, diarrhea, etc., thus increasing the need for protein. Unless contraindicated, the personal likes and dislikes of the patient should be given every attention.

It is impossible to give one specific diet for the cancer patient. In cases of carcinoma of the gastro-intestinal tract, the specific dietary regime will depend upon the nature of the disease and will be governed by the location of the lesion, whether obstructive or nonobstructive, stage of advancement, whether surgical intervention is practical, and the nature of the functional disturbance and secretory disorders.⁶

Anything that interferes with chewing and mixing of food with saliva, as carcinoma of the oral cavity, obstructs the first step in the digestive process, and, if chewing can't be performed, a diet must be adopted of such consistency as to obviate the need of it. Carcinoma of mouth tissues may call for a liquid diet. Obstruction of the esophagus may require feeding by gauge. Whenever there is inflammation of the esophagus, the diet must be bland as well as liquid.¹¹

In cases of carcinoma of the stomach, the degree of stomach acidity needs to be determined by gastric analysis. In cases of hyperchlorhydria, the treatment consists of decreasing or neutralizing the acidity. A bland, low fiber diet is used, because pressure from the fiber content of the diet tends to further stimulate acid-producing cells, and stimulating foods are eliminated, because they increase gastric secretion. Fat should be moderately high, as fat tends to depress secretion of gastric juice and to decrease outpouring acid. The protein level should be high, since in the process of digestion the protein combines with the gastric HCl and reduces the amount of acid left free.

Milk, cheese, gelatin and eggs are preferable to meat, because the extractive content of meat has a stimulating effect. Concentrated foods such as sweets, extremely hot or cold foods which are stimulating, pastries, fried foods, hot breads which require longer digestion periods, and alcohol are contraindicated.⁴

Hypoacidity, hypochlorhydria and achlorhydria may be found in carcinoma of the stomach. Easily digested, nonirritating foods are given, as they decrease the minimum work of the stomach. Fat is reduced to a low level of intake because of its depressing effect on secretion of gastric juice. Meat juices and fruit juices, especially the citrus fruits, should be used, as they tend to stimulate gastric flow. Foods that leave the stomach quickly should be given so fermentation can't take place. Remember that attractive, savory, palatable food is conducive to copious flow of gastric juice.⁴

A diet which is soft or liquid and highly nutritious and concentrated can be obtained by the use of numerous foods. If the patients can take chopped vegetables and fruits, these are more palatable than sieved. The commercial ones prepared for toddlers can be used, or they can easily be prepared in the home. Vegetables and other foods such as meats that need to be finely divided can be prepared by the use of the Waring blender. The blender will chop the food to the desired consistency.

If the diet must be liquid, it will no doubt need to be concentrated to reduce swallowing to a minimum. The strained or sieved commercial vegetables and fruits can be used. They can also be prepared in the home by putting the food through a sieve. Milk may be added to strained vegetables, fruits, cereals and eggs to give the consistency desired and increase the nutritive value. A more concentrated formula can be obtained with dried milk than evaporated milk. The commercial strained meats which are now available can also be used on the liquid diet.

There are many commercial protein hydrolysates and protein concentrates on the market today that are of great value in increasing the protein intake of patients on a liquid diet with a limited fluid intake. The protein level of a liquid diet can easily be maintained at an adequate level by the use of the strained meats, eggs, dried milk, concentrated proteins, and protein hydrolysates. The use of various creamed soups add to the variety of the diet. Junket, jello, etc., frequently can be taken by the cancer patient and help to satisfy the desire for solid food.

It is extremely important to keep the soft and

liquid diets palatable, attractive, and varied so the patient's appetite will be stimulated rather than depressed, and the food intake will be such that he will not suffer from malnutrition.

Summary

In summary, there are certain statistics that indicate there may be a relationship between cancer and diet. For instance, primary cancer of the liver accounts for less than 1 per cent of all tumors among the people of the western nations, but its incidence in orientals and native Africans is high. The typical diet of these people is high in carbohydrate and low in many nutrients.

Experimental studies with different types of tumors in mice show that caloric restriction results in inhibition of tumor formation. The lower the caloric inhibition, the greater the inhibition. The level of carbohydrate in the diet does not appear to be an influencing factor, but rather the level of caloric restriction. The level of fat in the low caloric diet appeared to be an influencing factor on some types of tumor, as fat enrichment of low caloric diets resulted in less tumor inhibition than equicaloric diets with lower fat levels. A fat-enriched normal diet is a nutritional modification that may have a diversity of effects depending upon the type of tumor.

Tannenbaum^{1f} states that it appears, tentatively, that variations in levels of protein intake, if high enough to permit normal growth, result in relatively small differences in formation of many types of tumors. Many experiments have shown, though, that a low protein content diet is favorable to the production of liver tumors with butter-yellow in rats.

Numerous studies have been made on the relationship of origin and growth of cancer and vitamins. The most significant relationship appears between the B-complex vitamins and cancer. Yet it is hazardous to make any definite statements at this time. Extensive generalizations from effects obtained on one tumor cannot be applied to other types of tumors. Supplements of riboflavin, a B-complex vitamin, afford protection against the origin and development of some types of tumors in experimental animals. Riboflavin deficiency had an inhibiting effect on tumor growth only when the riboflavin deficiency was so severe the animal did not maintain body weight.

Several investigators found that many of the rats on a choline-deficient diet developed cancer, whereas the control animals on a diet supplemented with choline chloride were free from such lesions.

There is some evidence that inositol injections inhibit growth of transplanted sarcomas in mice.

Investigators have carried out experiments that indicate folic acid preparations inhibit tumor formation and growth. Other workers who repeated the experiments obtained different results.

At the present time, we cannot make many definite statements about diet and cancer prevention. It does appear that maintenance of body weight at a minimum compatible with good health may prevent or delay the development of cancer in many individuals. A diet adequate in all nutrients seems to be most desirable. Many believe the oral and pharyngeal symptoms of chronic riboflavin and nicotinic acid deficiency are precancerous factors.

Until we know more about the nature of the influence of diet and cancer growth, the diet for the patient with cancer should be a diet for the greatest comfort of the patient. The diet must be modified to meet the needs of each patient. It is extremely important that the diet be attractive and palatable, as anorexia frequently occurs in these patients. The diet needs to be highly nutritious to meet the body needs, as cancer usually increases the need for nutrients and may also cause excess losses from the body along with poor assimilation.

BIBLIOGRAPHY

1. American Association for the Advancement of Science: Approaches to Tumor Chemotherapy—A Symposium of Papers and Discussions on Various Aspects of Tumor Chemotherapy. Developed from the Summer Meetings of the Section on Chemistry (C) of the American Association for the Advancement of Science at Gibson Island, Maryland, 1945-1946. Edited by Forest Ray Moulton. Washington, D. C., Am. Assoc. Advancement Sc., 1947.
- (a) Laszlo, D.: Studies on tumor growth inhibitory substances, p. 148.
- (b) Leuchtenberger, C.: Results of treatment of spontaneous tumors with folic acid and allied substances, p. 157.
- (c) Lewisohn, R.: Chemotherapeutic regressions of transplanted and spontaneous cancers in mice, p. 139.
- (d) Opie, E. L.: Influence of diet on production of hepatic tumors induced by p-dimethylaminoozobenzene, p. 128.
- (e) Sugura, K.: Effect of intravenous injection of yeast and barley extracts and l. casei factor upon spontaneous mammary adenocarcinoma in mice, p. 208.
- (f) Tannenbaum, A.: The role of nutrition in the origin and growth of tumors, p. 96.
2. Annual Review of Biochemistry, vol. xvii. Annual Review Inc., Stanford University, Calif., 1948.
3. Ackerman, L. V., and del Regato, J. A.: Cancer: Diagnosis, Treatment, and Prognosis. St. Louis, Mosby, 1947.
4. Barborka, C. J.: Treatment by Diet, ed. 5. Philadelphia, Lippincott, 1948.
5. Bicknell, F., and Prescott, F.: The Vitamins in Medicine, ed. 2. New York, Grune & Stratton, 1946.
6. Bridges, M. A.: Dietetics for the Clinician, ed. 4. Philadelphia, Lea and Febiger, 1941.
7. Copeland, D. H., and Salmon, W. D.: Occurrence of neoplasms in liver, lungs and other tissues of rats as result of prolonged choline deficiency. Am. J. Path., xxii:1059-1079 (September) 1946.
8. Engel, R. W., Copeland, D. H., and Salmon, W. D.: Carcinogenic effects associated with diets deficient in choline and related nutrients. Ann. New York Acad. Sc., xlix:49-67 (Sept. 7) 1947.
9. Ewing, J.: Neoplastic Diseases: A Treatise on Tumors, ed. 4. Philadelphia, Saunders, 1940.
10. Harris, R. S., and Thimann, K. V., editors: Vitamins and Hormones: Advances in Research and Applications, vol. ii. Academic Press, Inc., New York, 1944.
11. Hawley, E. E., and Carden, G.: The Art and Science of Nutrition: A Textbook on the Theory and Application of Nutrition, ed. 2. St. Louis, Mosby, 1944.
12. Hoffman, F. L.: Cancer and Diet, with Facts and Observations on Related Subjects. Baltimore, Williams and Wilkins, 1927.
13. Kensler, C. J.: Effect on diet on production of liver tumors

- in rat by N, N-dimethyl-p-aminoazobenzene. *Ann. New York Acad. Sc.*, xlix:29-40 (Sept. 7) 1947.
14. King, C.: New advances in science of nutrition. *J. Am. Dietet. A.*, xxv:109 (February) 1949.
15. Liver Cancer in Bantu and American Negro. *Nutrition Rev.*, iii:19-21 (January) 1945.
16. Martin, H., and Koop, C. E.: Precancerous mouth lesions of avitaminosis B; their etiology, response to therapy and relationship to intra-oral cancer. *Am. J. Surg.*, lviii:195-225 (August) 1942.
17. Miller, J. A.: Studies on mechanism of effects of fats and other dietary factors on carcinogenesis by azo dyes. *Ann. New York Acad. Sc.*, xlix:19-28 (Sept. 7) 1947.
18. Morris, H. P.: Effects on genesis and growth of tumors associated with vitamin intake. *Ann. New York Acad. Sc.*, xlix:119-140 (Sept. 7) 1947.
19. Morris, H. P.: Some nutritional factors influencing origin and development of cancer. *J. Nat. Cancer Inst.*, vi:1-17 (August) 1945.
20. Rhoads, C. P.: Recent studies in production of cancer by chemical compounds; conditioned deficiency as mechanism; Bulkley lecture. *Bull. New York Acad. Med.*, xviii:53-64 (January) 1942.
21. Rusch, H. P., Kline, B. E., and Baumann, C. A.: Influence of caloric restriction and of dietary fat on tumor formation with ultraviolet radiation. *Cancer Research*, v:421-435 (July) 1945.
22. Rusch, H. P., and Baumann, C. A.: Nutritional aspects of cancer problem. *Nutrition Rev.*, iv:353-355 (December) 1946.
23. Stern, K., and Willheim, R.: *The Biochemistry of Malignant Tumors*. Brooklyn, Reference Press, 1943.
24. Tannenbaum, A.: Effects of varying caloric intake upon tumor incidence and tumor growth. *Ann. New York Acad. Sc.*, xlix:5-18 (Sept. 7) 1947.
25. White, J., and Andervont, H. B.: Effect of diet relatively low in cystine on production of spontaneous mammary-gland tumors in strain C3 H female mice. *J. Nat. Cancer Inst.*, iii:449-451 (June) 1943.
26. White, F. R., and White, J.: Effect of low lysine diet on mammary-tumor formation in strain C3 H mice. *J. Nat. Cancer Inst.*, v:41-42 (August) 1944.
27. White, J., White, F. R., and Mider, G. B.: Level of protein ingestion and appraisal in terms of protein composition. *Ann. New York Acad. Sc.*, xlix:41-48 (Sept. 7) 1947.

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CONFERENCE**

May 18, 1949

Summary of Clinical Record

A 33 year old white male mechanic was admitted to the University Hospitals in October 1947 because of an internal derangement of the right knee. Physical examination at that time was not unusual except for a blood pressure of 170/125. A meniscectomy was performed, and three months later several loose bodies were removed from the right knee.

He was readmitted to the medical service in July 1948 complaining of epigastric pain, hypertension, occipital headaches and dizzy spells. The epigastric distress had been present intermittently during the previous five months and was described as stabbing in nature and radiating around the right costal margin to the right subscapular area and shoulder. There was no apparent food intolerance, nausea, vomiting, dyspnea, jaundice, chills or fever. Hypertension had been known to be present since 1941. Within the ensuing year the systolic pressure varied between 170 and 200, and

he began to experience occipital headaches, dizzy spells, occasional scotomata, and nocturia once or twice per night. These symptoms continued, symptomatic relief being afforded by phenobarbital. The past history was noncontributory. One brother, 25 years of age, was known to have headaches and high blood pressure.

Physical examination disclosed a well developed, well nourished white male, apparently in good health. The arterial tension was 170/118; pulse rate, 80 beats per minute; temperature, 99.6 F., rectally; respirations, 18 per minute. The fundi showed some arteriolar constriction with slight increase in the light-streaking. The brachial vessels were hard and tortuous. The chest was clear to percussion and auscultation. Examination of the heart disclosed the point of maximum impulse to be at the fifth interspace in the midclavicular line. There was a soft precordial systolic murmur. The abdomen was moderately rigid on deep palpation throughout both upper quadrants. The remainder of the physical examination, including the neurologic, was within normal limits.

Laboratory examinations revealed the serologic tests for syphilis to be negative. The hemoglobin was 15.5 gm. per 100 ml. The differential leukocyte count was normal. The erythrocyte sedimentation rate was 44 mm. per hour. The erythrocytes numbered 4.48 million, and the leukocytes, 10,300 per cu. mm. Urinalysis disclosed no albuminuria, glycosuria or hematuria. Microscopic examination of the urinary sediment revealed no abnormalities. During the Mosenthal concentration test, the specific gravity rose to 1.024. Blood agglutination studies for brucellosis, typhoid, paratyphoid A and B, and tularemia were negative. The blood urea nitrogen and creatinine were 24 and 1.2 mg. per cent, respectively. The urea clearance was 91 per cent of normal. Plasma proteins totaled 8.29 gm. per 100 cc. with an albumin of 5.28 and globulin of 3.01 gm. Blood cholesterol revealed a nonfunctioning gallbladder with evidence of calcification. Intravenous pyelography was interpreted as disclosing normal function bilaterally. Roentgenograms of the stomach and duodenum were within the limits of normal. The electrocardiogram was normal; with sodium amytal intravenously, there was a maximum drop of the blood pressure from 195/126 to 125/95.

The patient was discharged 17 days after admission on benzedrine sulfate, 5 mg., and sodium amytal, 0.18 gm., three times a day. A low salt diet was advised.

He returned in September 1948, stating that during the interim he had had two attacks of abdominal distress similar to those previously de-

scribed. These were relieved within 15 to 20 minutes by morphine. Further inquiry revealed no significant historical or physical findings other than those previously disclosed. Cholecystectomy was advised, for which the patient returned in October 1948. At that time, the van den Bergh reaction was recorded at 0.5 mg. per 100 ml., indirect. The cephalin flocculation test was negative at 24 and 48 hours. On October 26 cholecystectomy and appendectomy were performed through a transverse right upper quadrant incision. Shortly after the onset of the procedure the blood pressure rose to 245/150. Following a phlebotomy of 300 to 400 cc. of blood, the pressure fell to 160/120 and remained at this level during the remainder of the operation. Systematic exploration of the abdomen, including the kidneys and adrenals, revealed no other abnormalities. The gallbladder was slightly larger than normal, thick-walled, and contained many calculi. Postoperatively, the patient's course was uneventful except for considerable upper abdominal pain, which disappeared prior to discharge on his ninth postoperative day.

He was readmitted in January 1949 complaining of increasingly severe occipital headaches during the previous three to four weeks which persisted throughout the day and were associated with dizziness. He had noted palpitation with exercise, slight exertional dyspnea, and occasional ankle edema. He had also observed muscle cramps in his forearms and calves and stated that his arms and feet "went to sleep easily." There had been no chest pain. On the day of admission he experienced tinnitus for the first time and became faint. Except for the presence of a right upper quadrant scar, physical examination revealed similar findings as those recorded on previous admissions. Laboratory examinations, including urinalysis, blood cells, hemoglobin, electrocardiogram, sedimentation rate, blood urea nitrogen, creatinine, cholesterol, proteins and urea clearance, were similar to those previously noted. A small section of the left gastrocnemius muscle was removed for biopsy. This was interpreted as essentially normal skeletal muscle.

In February 1949, through a transthoracic approach, a left thoracolumbar sympathetic ganglionectomy and splanchnicectomy was performed. At the beginning of the operation the blood pressure was 200/130. Shortly thereafter it rose to 240/130. After approximately one hour it dropped to 160/110, where it remained during the remainder of the procedure. Immediately after the operation the patient seemed to be responding in that he moved about, but shortly thereafter he

failed to respond to nocuous stimuli. Approximately 18 hours postoperatively the rectal temperature rose to 105.8 F. and the blood pressure dropped to 90/65. The pulse rate was 180 per minute. Mucus had accumulated in the tracheobronchial tree, and it was removed at bronchoscopy. No cough reflexes were noted during this aspiration. The patient seemed to improve thereafter in that there were fewer rales in his chest and the pulse was 132. Examination of the patient 24 hours after operation revealed a temperature of 105 F., dry skin, unconsciousness, conjugate deviation of the eyes to the right, and Babinski's sign on the left. During the ensuing 12 hours he remained unresponsive, the pulse ranging around 132 per minute; blood pressure, 166/120; rectal temperature, 100 to 101 F.; and respirations, 24 to 26 per minute. Approximately 36 hours postoperatively the respirations became more labored and the pulse was fast. Shortly thereafter the patient died.

Clinical Diagnosis

Essential hypertension.

Dr. W. Bean (Internal Medicine):* The problem which we have to deal with concerns hypertension, its mechanism, nature, management, and the things that may go wrong either spontaneously in the natural course of the disease or from efforts to correct it. The story is that of a young man who first came into the hospital for something unrelated to his subsequent difficulty. At that time, the casual observation was made that he had definite and rather marked hypertension, which didn't interfere with the surgery he had to undergo at the time, and, apparently, nothing else of consequence was noted. He was known to have had hypertension since the age of 27. On his admission to the medical service, he was complaining of pain in the epigastrium which radiated around to the right and up into the shoulder. That pain was not associated with systemic manifestations of gallbladder disease. There was no history of jaundice or fever. However, the x-ray studies demonstrated that not only did he have a nonfunctioning gallbladder, but also there were stones. He had a blood cholesterol level that was somewhat higher than normal.

This brings us straight away to the consideration of the age-old problem of the relation to hypertension of cholesterol, xanthomatous processes in general, gallbladder disease, arteriosclerosis and atherosclerosis. Is there any way that we can line up these factors, or is there simply the concomitance of the two situations? Gallbladder

*Discussed without knowledge of pathologic findings.

disease is relatively uncommon in people this young and is less common in men than in women, so we have an unusual circumstance. There is, however, nothing further in the clinical description which would indicate that we are dealing with xanthomatosis. It may be of some moment that this man had rather marked peripheral vascular sclerosis in his arms, and that later there was more arterial disease, muscular cramps, and pains in his hands and arms than one would anticipate in a person of his age who had had hypertension even for as long as six to eight years. The relationship between hypertension and the subsequent development of arterial disease doesn't follow a law by which we can predict what will happen to a given person with hypertension in terms of the ravages produced in the vascular structures of the body.

On his next admission, he came back because of bouts of severe epigastric pain which lasted for a short time. An operation was undertaken. We have the observation that during the operation his blood pressure underwent rather startling fluctuations, and, soon after the operation, he had a blood pressure reading of 245/150. It doesn't specify whether or not this was associated with any outburst of violent physical activity, such as might occur in the stage of induction of anesthesia, although, from the protocol, that can't be completely excluded. However, I will assume that such didn't occur. We don't know what was going on with reference to manipulation or operative procedures. He was phlebotomized. Ordinarily, the letting of blood is helpful when people go suddenly into left ventricular failure, but, as far as I know, it has no particular usefulness in a sudden crisis of hypertension. Then his blood pressure fell, and we have here the specific and explicit statement that "systematic exploration of the abdomen, including the kidneys and the adrenals, revealed no other abnormalities." That is of considerable importance in trying to evaluate the whole picture, because we know that, commonly, hypertension follows certain types of renal disease; and it is recognized that there is an uncommon type of hypertension, ordinarily a fluctuating and variable type, in which a tumor of the adrenal medulla (pheochromocytoma) may be the cause. This evidence can't be taken as a final and complete exclusion of primary renal disease or pheochromocytoma, but it makes those diagnoses hard to sustain without further evidence.

I think many of you are aware that Dr. Janu-ary has had a patient in his care for longer than a year who has all of the diagnostic criteria for pheochromocytoma and has had at least two rather

extensive explorations, and no tumor can be found. In spite of that, she gets specific and dramatic improvement when antiadrenalin drugs are given. She has the paroxysmal bouts of headache, hypertension, etc.

At any rate, the operation was successful, and not only was the gallbladder, which was obviously and seriously diseased, removed, but opportunity was taken to do what could be done to exclude the relationship of hypertension to a pre-existing renal disease or to a coexisting tumor of the adrenal gland. The nature of this postoperative upper abdominal pain is unclear, but, presumably, it was nothing more than the "gas pains" which anyone who has had an operation may encounter. On a prior admission, there was slight retention of urea, but he still retained capacity to concentrate the urine to a specific gravity of 1.024. The sedimentation rate was increased, and studies under the narcosis induced by amytal indicated that the hypertension had not arrived at a place where it was fixed and from which it would not or could not retreat.

Following this operation and discharge from the hospital, he came back in January after a short period of time, and his disease had taken a somewhat ominous turn. He encountered increasingly severe occipital headaches; he had had dizziness; and he was now for the first time beginning to show indications of congestive failure, as manifested by palpitation on exercise, exertional dyspnea, and slight ankle edema. He had observed muscle cramps in the forearms and calves, and his feet went to sleep easily. In view of the fact of his markedly sclerotic peripheral vessels, it is suggestive that the circulation in his extremities had been impaired. There was no chest pain nor anything to suggest that the coronary arteries were specifically or primarily involved. Another symptom perhaps related to the cranial blood flow is that he had had buzzing in the ears and faintness, although it is not recorded that he actually became unconscious. Then, there is the observation that he had a piece of muscle removed, but the examination didn't reveal anything wrong with the skeletal muscle. This indicates that the clinicians were considering periarteritis nodosa or polyarteritis. We don't have any further clue, and the evidence given is negative. That doesn't eliminate periarteritis nodosa, because, though disseminated, it may have a spotty distribution, and one may get negative biopsies just by virtue of having selected the wrong bit of muscle to look at.

Since this man's hypertension was progressing, he was studied concerning the advisability of a sympathectomy. In February, a month after his

admission, he had an operation for a sympathetic ganglionectomy and splanchnicectomy. This operation again was characterized by somewhat peculiar vasomotor changes. There was an initial period when the blood pressure sailed up, and then it went down rather precipitously; but it remained at a hypertensive level—although somewhat lower than the immediate preoperative blood pressure had been. He failed to recover normally from the operation, and, 18 hours after completion of the operation, his rectal temperature was found to be almost 106 F. At that time, his blood pressure had gone all the way down to 90/65 and his pulse was 180. Presumably, this rather pronounced tachycardia was a sinus tachycardia. His cough reflex had gone, and, 24 hours after operation, he was beginning to show indications of focal disorders in the brain which would suggest that he had thrombosis, or hemorrhage, or perhaps something else involving the right side of the cerebral cortex. Finally, just short of a day and one half after the operation, he suddenly got worse and died.

There are a number of points that need to be emphasized. There can be no question that we have good evidence, insofar as it goes, of the probability that this man originally had benign essential hypertension. He had high blood pressure for a long time before he had symptoms from it. He had one brother who had hypertension, and, although we know nothing about the psychosomatic aspects of his background or his emotional state, there is no clue in the protocol that those factors were considered important. Then, after a period of medical attention, and with the removal of a diseased gallbladder, his trouble takes a turn for the worse. We have negative evidence which suggests that he didn't have one of the more uncommon diseases to cause his hypertension, namely, adrenal tumor or periarteritis nodosa. Furthermore, in view of the fact that his renal function was sustained well enough for such a long time, there is no suggestion that he had antecedent Bright's disease. It would seem the part of wisdom to suppose that he originally had essential hypertension of the benign variety which, for reasons still unknown, became malignant, and that finally he had a devastating reaction to an attempt to help him along by doing a sympathectomy. I don't believe one could justifiably exclude some of the rare diseases that were mentioned, even though the evidence doesn't point to them. People with essential hypertension may have rather variable blood pressures, but under two circumstances this man did have dramatic episodes associated with

abdominal manipulation, and the remote possibility of a hidden pheochromocytoma or one located extra-abdominally remains a possibility. I think, however, that one can only legitimately include it as a probability.

Then the nature of this terminal episode has to be considered, and it is well recognized that cerebral circulation may be adversely affected by anything which reduces the blood pressure from its previous level. This man had had hypertension for a long period of time, and presumably he was unable to get adequate cerebral circulation when his blood pressure fell. That may have been associated with the occurrence of a thrombus; it may have been associated with what Dr. Sheinker, of Cincinnati, calls vasoparesis or vasoparalysis, which may be produced by any form of vascular or general anoxia which later leads to diapedesis of blood cells and finally produces massive hemorrhage. So he may have had a rather large hemorrhage associated with hypotension, cerebral anoxia, and vascular changes attendant thereto. On the other hand, he may have developed a thrombus because of reduced blood flow and the shock which followed operation; or, conceivably, he might have had a coronary accident in which he had an acute myocardial infarct associated with coronary sclerosis. Reduced blood flow with shock and hypotension caused the cerebral difficulty by reducing blood flow through a narrowed cerebral artery without obvious gross acute vascular lesion in the brain. So, as a final conclusion, the evidence strongly points to the probability that this man had essential hypertension which became malignant, and that he died as a result of shock attending the surgical procedure of sympathectomy and a cerebral accident whose causes are not clear to me at the time. I would not be too surprised if some rare disease actually existed, such as periarteritis nodosa or pheochromocytoma, although no one would be justified in making the diagnosis from the story presented in the protocol.

Dr. S. Forbes (Radiology): On the first admission, an oral cholecystogram showed radiopaque stones at the liver edge but nonvisualization of the gallbladder itself. We could also see the gallstones on the plain film of the urinary tract. They were in the right upper quadrant. Incidentally, the intravenous pyelogram was negative. There was no evidence of calcification in either kidney area except for the shadow of the gallstones which were seen to shift in relation to the kidney outlines.

Dr. F. Stamler (Pathology): I'd like to mention one thing which was excluded from the

protocol. One reason for the muscle biopsy was that lesions of small arterioles which suggested periarteritis nodosa were found in the appendix which was removed at the time the cholecystectomy was performed. These were not considered to be diagnostic but were suggestive.

Dr. J. Embick (Medicine): Are there any tests which can be used to prove the presence or absence of functioning tumors of adrenal medullary tissue, whether or not they involve the adrenal gland itself?

Dr. R. Flocks (Urology): From my experience, I believe that unless the tumor is quite large it is difficult to make the diagnosis of adrenal tumor by means of either an intravenous pyelogram, perirenal oxygen, air injection, or abdominal exploration. There is enough variation in the position of the kidney so that unless the tumor of the adrenal is large one cannot tell from the intravenous pyelogram, which merely gives the position of the kidney, that such a tumor is present. The same holds true, fundamentally, for perirenal oxygen or air injection. It is extremely difficult also to really palpate the adrenals and kidneys transabdominally unless the parietal peritoneum is incised and the region of the upper pole of the kidney, definitely exposed.

My feeling is that the only way to be really sure about the presence or absence of a tumor in the adrenal is to expose the adrenal directly by an incision into the retroperitoneal space either transabdominally, transthoracically, or through the ordinary kidney incision (preferably the latter) and actually palpate or possibly even make an incision through the suspicious area in the adrenal.

Therefore, the fact that the intravenous pyelograms in this patient were normal and the adrenals felt essentially normal on abdominal exploration simply meant that a large adrenal tumor was not present. The average adrenal tumor is not large, and he could well have had an adrenal tumor as far as these two examinations were concerned.

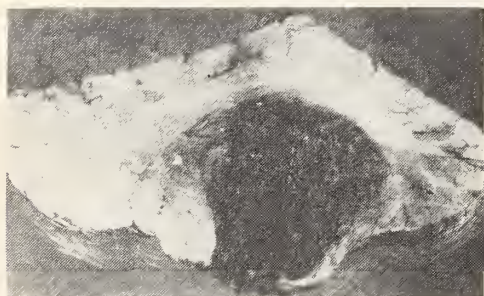


Fig. 1. Brain Hemorrhage.

Necropsy Diagnoses

Cerebral hemorrhage, recent, left midbrain and cerebellum, with intraventricular extension.

Pheochromocytoma involving both adrenals and right periaortic chromaffin tissue.

Arterial hypertension (clinical) with arteriosclerosis, moderate.

Atherosclerosis, major and medium sized arteries, moderate.

Cardiac hypertrophy, moderate.

Right transthoracic thoracolumbar operative wound, recent.

Right hemothorax, moderate.

Pulmonary edema, bilateral, severe.

Chronic granulomatous tubercles, healing, left lung and spleen.

Early hypernephroma, left kidney.

Dr. Stamler (Pathology): The immediate cause of death was a massive recent cerebral hemorrhage. This involved the left midbrain and the cerebellum with extension into the ventricular system. There are a number of ways in which brain hemorrhage may be initiated, but at the time of necropsy it is seldom possible to distinguish one of these from another. We find a large mass of hemorrhagic brain tissue, and it is impossible to know whether it resulted from a thrombosed vessel or some other cause. In addition, there was a right hemothorax in conjunction with the transthoracic thoracolumbar sympathectomy with about 300 cc. of blood in the right thorax, and there was a severe pulmonary edema, bilaterally.

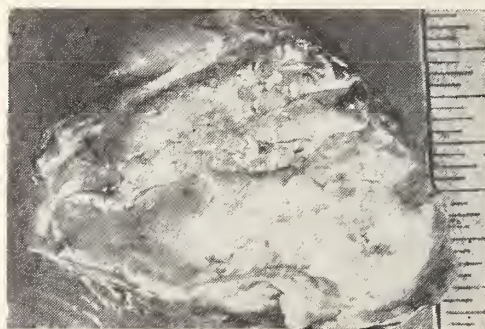


Fig. 2. Tumor, Left Periaortic Chromaffin Tissue.

Both adrenal glands were involved by neoplastic tissue which apparently arose from the medullary portions of the glands. The glands were not greatly enlarged, but the cortical tissue was partly replaced by tumor, so that the enlargement was not quite as great as would be expected with the size of the tumors present. There was a much larger tumor between the upper pole of the right kidney and the aorta behind the vena cava which was identical histologically with the tumors in-

volving the adrenals. These tumors were classified as pheochromocytomas, although they gave a minimal staining reaction with chrome salts, and biologic assay of the tissue for epinephrine was negative. There are several reasons why this might be so. The autopsy was performed about eight hours after death, so that there had been considerable time for autolysis to take place; and the assay was done sometime after postmortem examination, so there could well have been further autolysis. Both of these tests depend upon the active form of epinephrine being present, and the substance is rapidly destroyed or inactivated postmortem.

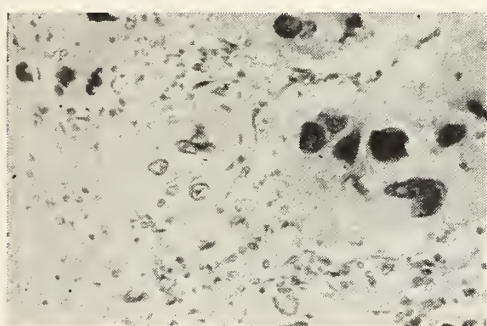


Fig. 3. Adrenal Pheochromocytoma.

There was considerable atherosclerosis of all the larger blood vessels of the body, including the coronary and cerebral arteries. There were arteriolar lesions throughout the body, but these had not progressed to a stage of serious functional impairment. There were no lesions diagnostic of periarteritis nodosa or any similar vascular disease. There was a small encapsulated tumor of the left kidney which was classified as a hypernephroma. It was quite small, and there was no evidence of metastasis. Incidental findings included many fibrocasseous healing tubercles of the left lung and spleen.



Fig. 4. Coronary Artery Showing Extreme Intimal Thickening.

surgery of hypertension with particular reference to clinical results. The procedure of surgery for hypertension is relatively new. In 1923 Danielopolu proposed that section of sympathetic nerves might prove useful. The first such operation was carried out in 1925 by Adson and reported upon by him and Rowntree. The second such case, this time an instance of malignant hypertension, was recorded in 1934. Since then, several series have been worked up, the largest of which is that of Dr. Max Peet who reported upon some 350 cases in 1940. Smithwick's series was published in the same year, and in 1941 Grimson reported a third series.

Within recent years clinicians have endeavored to establish criteria for the selection of surgical patients which might yield optimal results. The remarks which follow should be prefaced by the observation that at this time there is no universal agreement about just which criteria are to be employed. The selection of the surgical candidate is at present a matter which rests largely with the various clinics. It is generally understood that whatever criteria are adopted are tentative only and subject to revision as follow-up information is acquired.

The criteria employed at this hospital are in effect those employed at the Massachusetts General Hospital and the Lahey Clinic. These are four in number and are concerned primarily with the lability of blood pressure. Patients with a "fixed" blood pressure are not considered satisfactory candidates. For estimation of the lability component, the blood pressure is recorded every hour during both sleeping and waking. Sleep can be induced conveniently by the use of sodium amytal. A sufficient degree of lability is considered to exist if the blood pressure falls to normal or near normal at any time during the test period.

The second criterion has to do with urinary function. Differential diagnosis demands consideration of the Goldblatt renal infarct phenomenon, inflammatory and degenerative kidney diseases, renal tumors, polycystic kidney, and the adrenal tumors. Dr. Flocks is entirely correct in pointing out that there are no clinical tests now at our command which do more than increase the probability that renal and adrenal tumors can be excluded. Likewise, Dr. Embick is correct in indicating that adrenal tumors (some of which are apparently derived from the embryonic neural medullary plate which gives origin to the sympathetic nervous system) can be found scattered remotely in the abdomen, thorax, neck and head. Such tumors are often of near microscopic magnitude. Regarding them, we cannot hope to ex-

Dr. R. Meyers (Neurosurgery): I have been asked to comment on the present status of the

clude their presence unequivocally by either gross palpation or roentgenographic study. At best, we endeavor to reduce the likelihood of their presence. The standard kidney function studies include examinations of the urine for albumin and formed elements, concentration tests, intravenous pyelograms, blood urea, creatinine, nonprotein nitrogen, and differential study of the plasma proteins. (You will note by reference to the protocol of this case under study that these tests were performed and were considered negative.)

The third criterion has to do with heart function. Patients in congestive heart failure are not favorably regarded as candidates for sympathectomy. In addition to the usual historical inquiries and clinical examination of the heart, an EKG and a six foot heart plate are routinely taken.

Finally, there is the matter of the optic fundi. Individuals exhibiting advanced hypertensive retinopathy, marked AV nicking, exudates around the vessels, and a widened "silver streak" usually have such advanced degrees of hypertension as to preclude their being accepted for operation. However, as elsewhere in medicine, multiple rather than unit factors are the rule, and a patient would not be excluded from sympathectomy if the objective findings were confined chiefly to the retinal vessels.

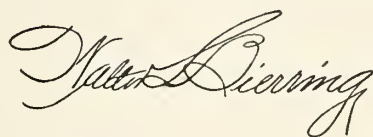
We are now in a position to speak of the results obtained from the use of the criteria outlined above. In Poppen and Lemon's series (1947) of 100 successive cases subjected to sympathectomy the results were reported as follows: good, 47 per cent; fair, 24 per cent; and unsatisfactory, 22 per cent. The operative mortality was 0.5 per cent; case mortality, 1 per cent; and death occurring subsequent to the patient's discharge from the hospital, 6 per cent. By *good*, Poppen and Lemon refer to postoperative patients free from headaches, dizziness, palpitation, asthenia, nervousness and hot flushes, and whose blood pressures are at normal levels or levels regarded as nondangerous, i.e. below 150 diastolic and 100 systolic. Their *fair* group consists of postoperative patients who are symptomatically comfortable, but whose blood pressure, while lower than that recorded preoperatively, exceeds 150/100 mm. Hg. The *unsatisfactory* patients include those with neither symptomatic nor objective relief.

The most valid clinical study bearing upon the results of surgery in hypertension is that of Palmer (1947) who reported a series from the Massachusetts General Hospital. I regard this as a significant study for two reasons: first, because the evaluations were made by someone other than the operating surgeon, and, second, because

there was a valid control group. Dr. Palmer, an internist, evaluated Dr. Smithwick's cases, measuring the data concerned against a series of controls. The latter consisted of patients who met all the criteria routinely employed in the selection of cases for operation, but who, for one reason or another, were not operated upon. At the Massachusetts General Hospital essential hypertensive cases are classified as follows: *grade 1*, early, mild hypertension; *grade 2*, moderate hypertension; *grade 3*, late, benign hypertension; and *grade 4*, malignant hypertension. Malignant hypertension according to this classification is that occurring in individuals under 50 years of age (usually under 40) whose blood pressure is decidedly high, whose optic fundi reveal edema with or without exudates and hemorrhages, who present cardiac enlargement and evidences of congestive heart failure, and who exhibit evidences of renal impairment and renal failure. *Grades 1, 2 and 3* exhibit varying degrees of objective disturbances bearing reference to height of blood pressure and its lability, cardiac function, renal function, and the optic fundi. In contemplation of these grades, I concur completely with the remarks made by Dr. Bean to the effect that in actual practice these grades so merge with one another that it becomes largely an arbitrary matter for anyone to set up pigeonholes regarding the nonmalignant and malignant type.

Palmer's findings were as follows: Of 12 patients in *grade 1* subjected to surgery, 83 per cent exhibited normal or near normal blood pressures for the follow-up period of three to five years. Of 26 *grade 1* patients not subjected to operation only 27 per cent showed normal or near normal blood pressures for a comparable period. In *grade 2*, 7 patients were subjected to operation, 70 per cent of whom exhibited normal or near normal blood pressures. Of 7 comparable patients not operated upon only 14 per cent showed similar improvement. Of 18 patients in *grade 3* 22 per cent exhibited reduction in blood pressure to normal or near normal, whereas among 10 nonsurgical cases 10 per cent showed a similar improvement. In the malignant group of *grade 4* 12 patients were subjected to operation. Of these 57 per cent maintained a blood pressure below 150/100 for three or more years following operation; whereas, all the nonsurgical cases died within this time. Commenting on this data, Palmer said, "By a measure that we wish to take, a parallel follow-up of matched cases showed that dorsal lumbar sympathectomy was definitely superior to medical treatment in controlling blood pressure."

STATE DEPARTMENT OF HEALTH



DIARRHEA OF THE NEWBORN

Two Related Cases Are An Epidemic

Epidemic diarrhea of the newborn is described in the American Public Health Association handbook, *The Control of Communicable Diseases*, as: "An acute communicable disease of high infectivity affecting newborn infants in the nurseries of lying-in institutions. It is recognized by the characteristic clinical picture of severe diarrhea with watery stools containing little or no mucus and no blood, dehydration and acidosis. Signs of other than enteric infection are lacking in uncomplicated cases; there is no fever except when severe dehydration is present, and when pneumonia, otitis media, or other complications occur terminally. The disorder spreads rapidly from baby to baby in a nursery for newborn infants and is marked by a high case-fatality rate. Laboratory findings are negative; postmortem examinations show remarkably few tissue changes and none pathognomonic of the disorder. Epidemic diarrhea of the newborn may be confused with *Salmonella* infection, bacillary dysentery, and with diarrhea incidental to other disorders."

Diarrhea of the newborn must be considered to be present when diarrhea as manifested by four or more stools in any 24 hour period occurs in any infant. The only exceptions are those infants who are entirely breast-fed and show no other signs of illness.

An epidemic state must be considered if a second case occurs in any contact of the first case or in another infant in the same institution within a two week period following the first case.

While no absolute proof as to the original source of the epidemic has ever been found, some Iowa investigations have indicated the following sources:

- (1) A nursing attendant who had bouts of diarrhea—when transferred to another part of the hospital, the repeated epidemics ceased.
- (2) A mother with severe diarrhea before birth of twins—subsequently, the twins were the first

cases of the epidemic diarrhea appearing in the nursery.

- (3) Imperfectly processed formulae—from which colon bacilli were cultured the day after the first cases appeared.

The rules and regulations for the control of communicable diseases require the following measures for epidemic diarrhea of the newborn:

Control Procedures

Case:

- (1) Immediate reporting of the cases to the Iowa State Department of Health.
- (2) Isolation is required. The infected baby shall immediately be removed from the nursery to isolation quarters, where the baby shall be cared for by a separate nursing staff skilled in isolation technic and who do not come in contact with other infants or children.
- (3) Concurrent disinfection is required.
- (4) Terminal disinfection is required.

Contacts:

- (1) The contaminated nursery shall immediately be closed to new admissions.
- (2) Admissions to the maternity service shall immediately be suspended.
- (3) All exposed babies in the contaminated nursery shall be cared for by a separate nursing staff skilled in isolation technic.
- (4) Maternity service may be renewed only after discharge of all contact babies and mothers, after thoroughly cleansing nursery, maternity wards and equipment, and improving technic and facilities to prevent recurrences.
- (5) Investigation shall be made of all infants discharged from the hospital in the period two weeks prior to the onset of the initially reported case.
- (6) Bacteriologic examination of stools is required of all sick and exposed babies, mothers and maternity service personnel.

TYPHOID CARRIER CHECK TO BE INTENSIFIED

Now that typhoid fever has been reduced to the level that carrier follow-up requires more time than investigation of new cases does, we are modifying our programs as directed toward the need.

Every case of typhoid is being followed to make certain whether or not the patient becomes a convalescent or chronic carrier. The chronic carrier is the person who *has not* had typhoid fever within the last 12 months and who is found by laboratory tests to be shedding the organisms. He may have had a known case of typhoid fever and continue to harbor the organisms of the disease, or with no known history of typhoid fever he may be identified as a carrier during the course of a typhoid case investigation. Organisms obtained from every new case and from every carrier are being typed to establish or rule out possible epidemiologic relations between cases and carriers. If they are of different types, they could not have been related epidemiologically in spite of circumstantial evidence.

See below a copy of the typhoid carrier agreement made with any known chronic carrier. Another sheet, a record of investigation and follow-up, is also kept to provide information both for study of typhoid carriers and for administrative procedures in the control of the spread of typhoid fever. When properly used, all necessary information about the carrier and his associates will be recorded.

This record is opened by the health officer when a carrier is found or when a case continues to carry the micro-organisms for at least one year after he is free of fever. The record is kept in an active file from year to year and is closed only when a carrier dies, moves from the county, or becomes freed of the carrier condition. When a typhoid carrier record is opened by a health officer, a copy of the record along with a copy of the typhoid carrier acknowledgment is sent to the director of the Division of Preventable Diseases.

If a carrier moves to an organized county in the state, a letter giving such information as necessary is written to the health officer of the county into which the carrier has moved and sent along with a copy of his record. A copy of this letter should be sent to the director of the Division of Preventable Diseases. The signature of that carrier should be obtained on a new typhoid carrier acknowledgment in the new county. If a carrier moves to an unorganized county, or out of the

state, then a letter of information and a copy of his record is sent to the director of the Division of Preventable Diseases. A typhoid carrier roster is kept. This roster is composed of all cards made for carriers in previous years. These cards are filed in two sections: (1) active, or (2) closed.

By properly using this record, a health officer or nurse will have at hand at all times a picture of the circumstances surrounding the carrier. By referring to the record, they may determine which contacts have been inoculated and then see that those who have not been inoculated receive the immunization. Such contacts should receive typhoid vaccine yearly. Except under special circumstances, there is no reason to require feces and urine specimens after obtaining two positive specimens one year after recovery. A visit by the health officer or nurse should be made every six months to see that precautions are taken to prevent spread of the disease. The sanitation officer should visit the carrier regularly to see that proper facilities for excreta disposal are provided and kept in proper condition.

IOWA STATE DEPARTMENT OF HEALTH DIVISION OF PREVENTABLE DISEASES Des Moines, Iowa

TYPHOID CARRIER ACKNOWLEDGMENT

Acknowledgment Concerning

(Name)

(Address)

I hereby acknowledge that I have been informed by, that I am a chronic typhoid carrier and that in order to prevent the spread of the disease to others, it will be necessary for me to conform to the following recommendations:

That I should not prepare or handle any food to be eaten by persons other than members of my own family;

That all members of my household should receive the typhoid vaccine every two years;

That I should have provided at my home a sanitary method of excreta disposal and should dispose of my excreta only by such method;

That I should wash my hands thoroughly with soap and water after each visit to the toilet;

That I should not in any way assist with milking or in the handling of milk or milk utensils except that milk which is to be used by my own household;

That before changing my occupation or address, I should notify the health officer of such anticipated change of occupation or address.

.....
(Signature of Carrier)

.....
(Witness)

.....
(Date)

IOWA STATE DEPARTMENT OF HEALTH
Division of Preventable Diseases

The JOURNAL of the Iowa State Medical Society

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Vol. XXXIX JULY, 1949 No. 7

Official Issue

As is customary, the current issue of the JOURNAL presents the complete transactions of the House of Delegates at the ninety-eighth annual session. Each member is urged to go over these reports. Especially of interest to every physician in Iowa will be the report given by the Committee on Medical Education and Hospitals. Members who were unable to attend the annual session of the Society are enabled by means of this official issue to find out exactly what is being done by the officers. Too often, these reports appear dry and uninteresting to read, but the least each member can do is to review this section. It is hard to appreciate the immense amount of effort expended by the members of the various committees in carrying out their functions. However, perusal of these reports will not only keep each member informed regarding the activities of the State Medical Society, but also afford a realization of the high caliber of work which has been accomplished during the year.

We Need More Resolutions Against Compulsory Health Insurance

Lest we grow too complacent in Iowa about our efforts in the national educational program, may the JOURNAL inform you that as a state we rank low, too low, in the number of resolutions we have procured opposing compulsory health insurance. Possibly our county medical societies think the members of Congress should know they are opposed to anything but a voluntary system

of life. To tell the truth, our Iowa Congressmen probably do know it, but there are some die-hards who still insist there is a large segment of the medical profession which favors compulsory health insurance. For the sake of the record, therefore, every county medical society should pass a resolution opposing compulsory health insurance and see that a copy of it is sent to this office and to members of the Iowa Congressional delegation.

Individual doctors should also endeavor to have similar resolutions passed by the various organizations to which they belong. Certainly the citizens of a community who have trust and confidence in their doctor will be willing to have him explain the dangers to them in compulsory health insurance and will be predisposed to enact a resolution opposing it.

Don't, we beseech you, take the attitude that you don't want to get "mixed up in politics." Quoting Dr. Lull, "We are mixed up in politics whether we like it or not, because medicine has been brought under political attack. The only question which remains is whether we are going to defend our profession against that political attack and how we can do it most effectively. . . . American medicine needs to present a united front against politically controlled medical practice, and we believe it is not only ethical, but highly desirable, for our scientific groups to make their position known. Let's stand up and be counted."

We have done a good job so far in financing the educational campaign, in disseminating pamphlets to lay groups, in providing literature on compulsory health insurance, and in general educational efforts of one type or another. Let's add the other necessary angle of procuring resolutions from all county medical societies and from as many lay organizations as possible.

The A.M.A. Meeting

The Ninety-Eighth Annual Session of the American Medical Association attracted more than 13,000 doctors to Atlantic City the first week in June for what was in many ways a most important meeting. Although a full report of the meeting of the House of Delegates will be carried in the August JOURNAL, some of the high lights warrant immediate presentation.

Possibly the one which attracted most attention was the announcement of the Board of Trustees that plans were being made to retire Dr. Fishbein as editor of the *Journal of the A.M.A.* "The Board of Trustees is aware of the criticism of

the editor coming from within and without the profession. The Board recognizes that the public has come to believe that the editor is spokesman of the Association. The membership undoubtedly wishes the elected officials to speak authoritatively on all matters of medical policy."

In line with that, Dr. Henderson, chairman of the Board, said Dr. Austin Smith has for some months been in training as assistant editor. He said also the Board has asked Dr. Fishbein to eliminate speaking on all controversial subjects both by platform and by radio, to eliminate all interviews, including press conferences, except on scientific subjects, and to eliminate his diary in "Tonics and Sedatives."

Comment on this action was widespread. Senator Murray was said to be going to make capital of it, excoriating the Association for ousting one who was the foremost exponent of policies which are substantially unchanged. Most editorial writers seemed to feel the move was in the right direction, although most of them warned that if no change in reactionary policies took place, more harm would be done to the doctors' cause than Dr. Fishbein's pronouncements ever did.

The report of the Council on Medical Service should have served as definite assurance that the Association meant to take positive and constructive action on the economic problems of the practice of medicine. During the past year it has held many meetings with various groups—labor, farm, cooperatives, etc.—to discuss their needs and wishes. One of its major recommendations was complete and absolute separation of Associated Medical Care Plans from the American Medical Association. This was done and now AMCP is free to intensify its drive for a uniform plan for national enrollment in voluntary insurance plans.

Dr. Elmer L. Henderson, of Louisville, was unanimously made president-elect; Dr. James F. Norton, of New Jersey, was voted vice president; Drs. Lull, Moore, Borzell and Reuling were re-elected secretary, treasurer, speaker and vice speaker, respectively. Dr. L. H. Bauer, of New York, was re-elected to the board of trustees, and Dr. F. J. L. Blasingame, of Texas, was elected in Dr. Henderson's place. Chicago was chosen as the meeting place for 1952 (San Francisco is the site for 1950; Atlantic City for 1951); and Washington, Denver and Houston were named for the interim or midwinter session for the next three years.

The Conference of Presidents and Other Officers of State Medical Associations was held Sunday afternoon prior to the opening proper of the

A.M.A. meeting. First speaker was Mr. W. A. Richardson, editor of *Medical Economics*, who told of the first year of the British National Health Service. His talk was most interesting, dealing with cost, service, abuse, and deterioration of medical care. Mr. Cecil Palmer, of London, also spoke on the impact of socialized medicine on the British physician and his patient. Mr. Palmer was a most forceful speaker in what might be called true British tradition, and he appealed to American physicians to stand firm on their ideals and not to compromise.

The exhibits, both technical and scientific, were well housed in Convention Hall and, as usual, were of excellent caliber. Televised programs were provided daily, some in color and some in black and white, and attendance at these was maximum, every chair being filled during the day. The scientific programs were also heavily attended.

Atlantic City has many advantages as a convention site. Its hall is large and well arranged; the temperature is usually moderate and pleasant; its many hotels make it possible to have a large attendance; and the boardwalk provides a meeting place for many friends. Probably in no other city is it as easy to concentrate the medical meeting into one area and so separate it from the usual large city activity, all of which tends to make a more pleasant and congenial session.

Brucella Abortus in Swine

Recent investigation* of the incidence of brucellosis in swine has demonstrated *Brucella abortus*, contrary to the general belief that this organism is not pathogenic for swine. Previous attempts to isolate *B. abortus* from naturally infected animals have been unsuccessful, as have been attempts to infect hogs experimentally with *B. abortus*. *Brucella suis* is considered to be the etiologic agent of the infection in swine, although it is known that these animals are also susceptible to *Brucella melitensis*. In 1946 Borts, McNutt and Jordan isolated *B. melitensis* from 12 hogs, apparently the first such instance in the United States. Among 132 strains of *Brucella* isolated from hogs in the United States, Huddleson classified only 2 strains as *B. melitensis*.

In carrying out their investigation which extended over a period of six months, the authors obtained submaxillary lymph nodes from hogs slaughtered in one of the large packing plants in Chicago, immediately after the initial Bureau of Animal Industry inspection of the head glands. After the nodes were removed under sterile conditions, they were placed in individual sterile

screw-capped glass jars and returned to the laboratory where they were promptly cultured. Each node was trimmed of fat, well seared in a flame, sectioned, and the cut surface directly streaked on the surface of Trypticase-Soy agar medium, each instrument being resterilized between use on individual specimens. The inoculated plates were incubated at 37 degrees C. in an atmosphere of 10 per cent added carbon dioxide.

B. abortus was recovered from the lymph nodes of 8 hogs, all of which adhered to the differential characteristics of the species. Identification was established by carbon dioxide requirement, hydrogen sulfide production, growth on differential dye plates, and the use of specific absorbed typing sera. When inoculated into guinea pigs, in every instance characteristic infection resulted, with production of agglutinins and recovery of *B. abortus* in culture at postmortem examination.

There is no doubt that the *Brucella* recovered were from the sampled hogs, and not merely for the reason of the rigid technic employed. The isolations were made during four different weeks well scattered over the period of sampling. *B. melitensis* was also isolated along with *B. abortus* and *B. suis*. Plates were practically sterile in most cases where no *Brucella* was recovered; those demonstrating *Brucella* uniformly contained numerous colonies or even confluent growth.

The bearing of this demonstration of the occurrence of *B. abortus* in swine upon the brucellosis control program in domestic animals is obvious and of considerable practical importance. It may be that it will likewise clarify some points in the epidemiology of the disease in man.

*Public Health Reports, April 29, 1949, N. B. McCullough, et al.

Public Opinion on Animal Experimentation

The screams of the antivivisectionists and the Hearst press to the contrary, the great majority of the general population today favors the use of live animals in medical research and teaching. According to a survey conducted by the National Opinion Research Center, 85 per cent of the public are favorable to animal experimentation and the turning over of unclaimed pound animals to medical schools. The results of this survey should prove surprising to those who have been annoyed and hindered by the opposition, for 63 per cent did not even know groups existed opposing animal experimentation and of those who did only 12 per cent had even heard of the antivivisectionists.

However, only 47 per cent were consistent supporters of animal experimentation without reser-

vations. About a quarter objected to the use of certain animals, largely domestic, giving as their reasons their usefulness and sentimental relationship to man. And, when the factor of pain was presented, the percentage of those opposing the use of certain animals rose to 40 per cent. The majority withdrew their objection, however, when asked what their opinion would be if these animals were better suited than any other. About a fifth objected to certain uses of the animals.

The problem seems to be largely one of lack of interest and information, which leads to inconsistent and illogical points of view, rather than one of conscious opposition to animal experimentation, which appears to be limited to about 3 per cent of the public. While very ignorant of the specific contributions that the use of animals have made and the necessity of using particular animals in particular ways, the public recognizes that animal experimentation is an essential technic in medical research and education, and that attempts at human improvement are more valuable than animal life.

MORBIDITY REPORT

Diseases	May '49	Apr. '49	May '48	Most Cases Reported From:
Diphtheria	3	3	5	Cerro Gordo (2), Jefferson (1)
Typhoid Fever	0	1	0	
Scarlet Fever	49	83	123	Dubuque, Polk, Woodbury
Smallpox	0	0	0	
Measles	386*	393	1,083	Des Moines, Clinton, Polk, Fremont, Story, Clinton, Wright, Scattered
Whooping Cough	10	15	52	Black Hawk, Dubuque, Story, Woodbury
Brucellosis	29	37	7	Buena Vista, Clayton, Des Moines
Chickenpox	279	515	420	
German Measles	209	75	1	
Influenza	0	0	5	Dubuque (2)
Meningitis	2	3	11	Black Hawk, Boone, Dubuque, Woodbury
Mumps	329	600	488	Black Hawk, scattered
Pneumonia	9	13	12	Shelby
Polioyelitis	2**	8	18	Polk, Webster, Wright
Rabies in Animals	37	39	39	For the state
Tuberculosis	79	108	113	For the state
Gonorrhea	65	67	99	For the state
Syphilis	186	221	120	For the state

*Delayed Reports.

**1 Delayed Report.

Measles: delayed report—March, 718 cases; April, 492 cases—Clinton County.

Polioyelitis: 1 delayed case with January onset—Jasper County.

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Tuesday at 11:45 a.m.

WOI—Thursday at 11:15 a.m.

July 5-7	Polioyelitis
	Richard M. Johnson, M.D., Denison
July 12-14	Hospital Building Program in Iowa
	Miss Ruth Hackett, State Department of Health, Des Moines
July 19-21	Anemia
	C. Ray Phelps, M.D., Ottumwa
July 26-28	Indigestion
	Lawrence D. Amick, M.D., Sac City

NEWS NOTES

from the
Committee on Medical Service and Public Relations

More than 13,000 physicians from all over the world attended the Ninety-Eighth Annual Meeting of the American Medical Association in Atlantic City, N. J. The convention opened officially Monday morning, June 6, 1949, and continued through Friday. It was one of the most important meetings ever held by the largest medical organization in the world. The decisions of the session are vitally significant in determining the future of medicine in this country.

The House of Delegates considered many problems, including such matters as education of the American public on the dangers of compulsory sickness insurance, the personnel needs of the armed forces, and medical education.

Many doctors were attracted by the scientific meetings and scientific and technical exhibits. The number of exhibits far surpassed the meetings of the past. More than 300 papers on medical and surgical progress were presented by physicians from all over the world. The Convention Hall housed the exhibits and was the scene of the general scientific meetings and some of the general activities. Seven hotels and the Convention Hall were used for sectional gatherings. The first of the general scientific meetings was held Monday afternoon, June 6, in Convention Hall. The sessions, sponsored by the Council on Scientific Assembly, covered every phase of current interest in the field of medicine. Modern developments in surgery and in medicine were summarized on Tuesday.

Sectional programs were presented Wednesday, Thursday and Friday. Dr. F. F. Borzell, of Philadelphia, speaker of the House of Delegates, called the first session to order at 10 a.m., Monday. Reports were presented. The recipient of the Distinguished Service Medal, awarded annually for advancement in the field of medicine, was decided by ballot. Dr. Seale Harris, of Birmingham, was chosen to receive this award. Dr. Harris is professor emeritus of medicine in the Uni-

versity of Alabama, former editor of the Southern Medical Journal, and past president of the Southern Medical Association.

The nominees for this year's award were Dr. Alfred Blalock, of Baltimore, and Dr. Shields Warren, of Boston. The award is conferred annually "on the basis of meritorious services in the science and art of medicine." Dr. Harris was born March 13, 1870, in Cedartown, Ga. He obtained his degree in medicine at the University of Virginia in 1894 and did postgraduate work at New York Polyclinic, Johns Hopkins, and European medical centers, including the University of Vienna. He practiced medicine at Union Springs, Ala., before joining the medical faculty of the state university in 1906. In World War I he served as major on the staff of Surgeon General Gorgas and was cited by General Pershing "for conspicuous and meritorious service in France." The Distinguished Service Award was initially suggested by former President Harrison H. Shoulders of the Association. Nominations are submitted to a six man Committee on Distinguished Service Awards. This committee narrows down the field to five names, of which the Board of Trustees selects the three for submission to the House of Delegates. The process was devised to eliminate all considerations extraneous to achievement in the service of medical science.

The Passano Foundation, established by the Williams & Wilkins Company, medical publishers, of Baltimore, Md., presented its annual \$5,000 award to Dr. Oswald T. Avery, of New York, emeritus member of the Rockefeller Institute for Medical Research. The award was made to Dr. Avery for his extensive investigations of the pneumococci, their classification, analysis and immunologic relationships. This work led to a wider basic understanding of heredity and environment as well as to a better conception of the processes of infection.

A report on the actions of the House of Delegates will appear in the August issue of the JOURNAL.

FIFTY YEAR CLUB MEMBERS

June 21, 1949

ADAMS, ERNEST M.	Central City	LAUGEL, AMBROSE M.	Breda
ALDRICH, J. FRANK	Clarinda	LEASE, NIMROD J.	Crawfordsville
AMDOR, WILLIAM F.	Glendale, Calif.	LEE, GISLE M.	Thompson
BANNISTER, MURDOCH	Ottumwa	LOOSE, DAVID N.	Maquoketa
BARBER, OLIVER S.	Creston	McBURNEY, GEORGE F.	Belmond
BATES, WILLIAM R.	Fort Dodge	McLAUGHLIN, CHARLES W.	Washington
BEAM, WATSON W.	Rolfe	MacNAUGHTON, LUTHER D.	Eagle Grove
BEATTY, EDWARD D.	Mallard	MARBLE, PEARL L.	Liscomb
BELL, EDWARD P.	Pleasantville	MASON, STELLA M.	Mason City
BIERRING, WALTER L.	Des Moines	MILLS, FRANK W.	Ottumwa
BIRNEY, CLEANTHUS E.	Estherville	MINASSIAN, HAROOTUNE A.	Des Moines
BOYD, FRANK E.	Colfax	MORRIS, ZENELLA E. N.	Stockport
BOYER, HOWARD C.	Council Bluffs	MORRISON, WESLEY J.	Cedar Rapids
BUZARD, IRENARCH S.	Jefferson	MORSE, CHARLES H.	Eagle Grove
CARSON, ANDROS	Des Moines	MYERS, FRANK L.	Sheldon
CARVER, WILLIAM F.	Fort Dodge	NELSON, HARRY E.	Dayton
CHITTUM, JOHN H.	Wapello	NICOLL, DAVID T.	Mitchellville
COLE, ELMER J.	Woodbine	NORTON, ALVA C.	Rockwell City
COOK, CLARENCE P.	Des Moines	PACE, ARTHUR A.	Toledo
DEAN, FRANK W.	Council Bluffs	PATTERSON, JOHN N.	Burlington
DEAN, WILLIAM F.	Osceola	PECK, RAYMOND E.	Davenport
DENNISON, JOHN C.	Bellevue	PHELPS, MYRON H.	Van Wert
ELY, FRANCIS A.	Des Moines	PRESNELL, J. WILLIAM	Scranton
FARNUM, EARL P.	Sibley	QUIRE, FRANK E.	Lynnville
FIELD, GEORGE A.	Des Moines	RAMBO, DAVID T.	Ottumwa
FOLEY, FRED C.	Newell	REILEY, WILLIAM S.	Red Oak
FOWLER, CHARLES C.	Lovilia	RILEY, JOHN	Exira
FRANKLIN, GEORGE W.	Jefferson	ROBINSON, ROBERT E.	Waverly
GANOE, JAMES O.	Ogden	ROGERS, CLAUDE B.	Earlville
GARDNER, JOHN R.	Lisbon	RUML, WENTZLE	Cedar Rapids
GARDNER, PAUL E.	New Hampton	SAMS, JOSEPH H.	Clarion
GEESEKA, OTTO A.	Mount Pleasant	SANDERS, WILLIAM E.	Long Beach, Calif.
GILES, GEORGE C.	Oakland	SAWYER, PRINCE E.	Sioux City
GILFILLAN, HOMER J., SR.	Bloomfield	SCOTT, SOPHIE H.	Des Moines
GILLMOR, BENJAMIN F.	Red Oak	SHELTON, CHARLES D.	Bloomfield
GIVENS, HEZEKIAH F.	West Bend	SINNING, AUGUSTUS	Iowa City
GRAENING, CHARLES H.	Waverly	SMITH, FRANKLIN C.	Mount Ayr
GRAY, HENRY A.	Keokuk	STEVENS, HARRY L.	Floris
GRIFFIN, CLARK C.	Vinton	STINSON, ALICE C.	Estherville
GRIFFIN, JOHN M.	Des Moines	SUGG, HERBERT R.	Clinton
GRIFFIN, SARAH M. F.	Manson	THROCKMORTON, R. FRED	Des Moines
GUTCH, THOMAS E.	Albia	TINLEY, MARY L.	Council Bluffs
HARRINGTON, BURTON	Cedar Rapids	VANCE, FREDERICK E.	Eddyville
HEADY, CONDA C. C.	Bloomfield	VAN EPPS, CLARENCE E.	Iowa City
HEATHMAN, FRANK E.	Pocahontas	VESTERBORG, PEDER H.	Forest City
HEETLAND, LOUIS H.	Sibley	VON LACKUM, HERMAN J.	Dysart
HENRY, CLYDE A.	Farson	WALKER, HARRY L.	Cedar Rapids
HIGHT, WILLIAM B.	Des Moines	WALSH, THOMAS N.	Hawkeye
HULL, HENRY C.	Washington	WALSTON, EDWIN B.	Des Moines
HUSTON, HERBERT M.	Ruthven	WANAMAKER, AMBROSE E.	Hamburg
HYATT, CHARLES N.	Albia	WEDEL, JAMES R.	Keokuk
JASTRAM, ALFRED H.	Remsen	WELLS, FRED L.	Des Moines
JOHNSON, ALBERT P.	Sigourney	WESTENBERGER, JOSEPH C.	St. Ansgar
JONES, LOUIS H.	Wall Lake	WHITEHILL, NELSON M.	Boone
KAUFFMAN, WILLIAM A.	Marshalltown	WHITLEY, RALPH L.	Osage
KERLIN, JARED D.	Des Moines	WHITMIRE, WILLIAM L.	Sumner
KERN, LESTER C.	Waverly	WILSON, FRED C.	Colesburg
KING, DAVID H.	Batavia	WOLFE, THOMAS L.	Mount Vernon
KING, ELLIOTT R.	Letts	WOODBIDGE, JAMES W.	Emmetsburg
KISOR, FRANK H.	Mechanicsville	WRIGHT, WALTER N.	Rose Hill
KRIEBS, FRANK J.	Elkport	WYLAND, ASA O.	Underwood
LADD, FREDERICK G.	Cedar Rapids	YOUNG, HENRY C.	Bloomfield

TRANSACTIONS OF THE HOUSE OF DELEGATES

Iowa State Medical Society, Ninety-Eighth Annual Session, April 18-21, 1949

Monday Evening, April 18, 1949

The first meeting of the House of Delegates, held in connection with the ninety-eighth annual session of the Iowa State Medical Society, at the Hotel Fort Des Moines, Des Moines, April 18-21, 1949, convened at 8:35 p. m., Nathaniel G. Alcock, Iowa City, president-elect, presiding as the Speaker.

The Speaker: I do not think that I ever sat before an audience with as much nervousness under my diaphragm as tonight, because this is the first time that I have ever conducted a legislative body. I am going to try to do it with humility, and I am praying for prudence.

We have with us tonight two guests whom I would like to introduce before we start the regular program. One of our medical colleagues, whom many of you know, Dr. Edward S. Parker, of Ida Grove, is in the Senate. We have asked him to say a few words or as many words as he wishes. Dr. Parker!

Dr. Parker: Mr. President, distinguished guests, members of the House of Delegates, I do not know just exactly why I am called upon tonight, but I suppose it is because your president is exhibiting me as a remarkable case, the case of a nice old doctor who has lived a reasonably honorable life, practiced medicine for 40 years and then suddenly turned into a politician. Possibly I can give you some extenuating circumstances as to why a doctor should be a politician. I have observed in my brief career in the Senate that there should be more, at least a couple more, doctors over there, and they should probably be in the House. The legislature of the state of Iowa really holds all of us in the hollow of its hand; not only does it hold all of you, but it holds every city, every town, every profession. They are all creatures of the legislature. I think most of us during our busy careers have paid no attention to that peculiar and remarkable fact, but, if we do not pay more attention to it in the future, I do not know that we will have very much of a future.

I have noticed in the Senate (I am a new man there and I will be there for another session) what remarkable influence a doctor can have. Time and again, both on the floor and in executive sessions and in caucuses, I have been called to my feet to explain things to these laymen, and I believe that I have been able to exert quite a little influence and a steadying effort which has done a lot of good over there.

In the House there are not any doctors. The members of the House are highly representative of the people of Iowa. They represent all phases of our citizenry, but they are there for only two years at a time, and more than half of them this

year have never been there before. They have been very much perplexed over the medical situation, about which you will hear a lot tonight, no doubt, but they have had no one to guide them. One or two good doctors in the House could have prevented a great deal of the wild discussion and wild voting that took place, because these men really do not understand the situation. They think that there should be more doctors—and, when I say “doctors,” I mean doctors, not specialists; they should be distributed in a different manner than they are now. Many of them think that by letting down the bars, letting in various cults, and so on, they will get more doctors. If there had been anyone over there during this session to explain the situation to them, things would not have been as wild as they were.

I assume you are going to have a lot of discussion over the practice of medicine here tonight, from what your leaders have told me. I do not intend to go into that, but before I sit down I wish that you members of the Iowa State Medical Society would find two or three men who are willing to run for the legislature next session. Proposition the men who come from the country who are now landowners and are well enough fixed so that they can lay off for three or four months once in two years. They can do a world of good for us over there. Thank you very much. If there are any questions, I will try to answer them.

The Speaker: Dean Mayo Soley is with us, and this is his first meeting of the Iowa State Medical Society. He has a message that he wishes to bring to you, which is going to be very welcome. While I have not read it, I will endorse it. He is quite argumentative, and I rather look upon him as my arguing companion. This afternoon he almost convinced me, and, when they do that, they are good at argument. Dr. Soley!

Dean Mayo Soley: Dr. Alcock, delegates and guests, I am not here because I was asked; I asked to speak to you, and I come with humility because I am a new man in this state. I have a new job. I am learning as much as I can about it. I have recently gone through, in part, a legislative session which I think has pointed out a great deal to me, and which makes me realize that the medical profession of this state and the medical school have a number of problems in common, which I think we can settle together, but which I think we cannot settle otherwise.

Through unfortunate misinformation, I think the people of the state of Iowa, at least as represented by the legislative body, have felt that we need

more doctors than we do. I am not in a position to say how many doctors we need. I can say that the Medical School has produced more physicians than have died during the years 1942 to 1948, in spite of the fact that the figure of 57 graduates last year is the one that has hit the public mind, along with the fact that two to three hundred physicians were dying that same year. The figure 57 is correct; the figure two to three hundred is not.

Regardless of our need for the number of physicians, we do know that the people in certain areas of Iowa feel they are not getting adequate medical care, and the reason they feel this is that, as physicians have died, they have not been replaced in some of the smaller communities.

We at the Medical School realize this is a problem just as much as you do. In the months I have been here, with the cooperation of others on the faculty, and with the cooperation of Dr. Nicoll and Dr. Shaw, we have tried to form a program which perhaps will put us in better rapport with the general public, and, to follow Dr. Parker's suggestion, part of this program is to train men in their graduate years, as well as to influence them in their undergraduate years, to go into general practice.

In addition to that, we have taken what measures we can to increase the number of graduates. It is not the number of admissions that is most important; it is the number of physicians who are graduating from the medical schools.

We are also reviewing the possibility of increasing our classes, and I think we can increase them somewhat, but, with our present legislative budget, we are certainly going to be limited in that direction.

To me, these are just two of the fundamental problems.* Others would be the fact that we have not yet developed a plan for total medical care, even though we have a good beginning in Blue Shield; nor have we really covered the state with hospital insurance, even though we have a good plan in Blue Cross.

I feel, in brief summary, then, that, if we can get together and do some of these things which the public feels it needs, and probably does need, we can prevent the swing towards socialized medicine which is coming up in the newspapers. Some of you read the Des Moines Register of last Sunday stating that President Truman was going to present his plan to the committee, or at least to the people who will try to handle it, and there was an eulogy of Oscar Ewing who will help him in his publicity campaign. I am not just a member of the Medical School; I am a member of the State Society, and I feel that we have been behind in doing some of these things that the public believes it wants. I think we would be remiss if we did not recognize that and recognize it as a problem.

My plea, therefore, is to see if we cannot get behind some of these measures which many people

feel, including the American Medical Association, are the measures which may forestall the advent of socialized medicine. I hope at the end of these meetings, as problems are presented, that perhaps we can have further committees from the State Medical Society working with the Medical School in helping with this problem. I hope, also, that we can work a little more closely with Blue Shield and Blue Cross, as we have already tried to do. Thanks for letting me talk.

The Speaker: Mr. Conrad who was to appear on the program tomorrow morning is unable to be here. His place will be taken by Mr. Lawrence Rember, the executive assistant of the American Medical Association. If he is in the audience, I wish he would just stand for a moment so we can see him.

So far I have gotten along all right, and here I turn it over to the secretary to call the roll.

The roll call was taken by signed attendance cards which showed the following persons present:

DELEGATES

Adams—A. W. Brunk
 Appanoose—J. C. Donahue
 Black Hawk—E. L. Rohlf, Jr.
 Black Hawk—E. E. Magee
 Boone—W. H. Longworth
 Bremer—P. J. Amlie
 Buchanan—F. F. Agnew
 Buena Vista—H. E. Farnsworth
 Butler—F. A. Rolfs
 Cerro Gordo—C. O. Adams
 Cherokee—W. C. Brinegar
 Clarke—C. R. Harken
 Clinton—R. F. Luse
 Dallas-Guthrie—D. W. Todd
 Des Moines—F. G. Ober
 Dickinson—T. L. Ward
 Dubuque—F. P. Quinn
 Emmet—M. T. Morton
 Fayette—B. A. Hall
 Fremont—Kenneth Murchison
 Hamilton—F. F. Hall
 Henry—J. S. Jackson
 Iowa—C. F. Watts
 Jefferson—L. D. James
 Johnson—A. W. Bennett
 Johnson—R. H. Flocks
 Johnson—H. R. Jenkinson
 Lee—B. J. Dierker
 Linn—C. H. Stark
 Linn—Philip Crew
 Lucas—Dean Curtis
 Madison—I. K. Sayre
 Marion—R. V. Mater
 Marshall—O. D. Wolfe
 Montgomery—Oscar Alden
 Muscatine—C. P. Phillips
 O'Brien—T. D. Kas
 Page—C. H. Flynn
 Polk—M. T. Bates
 Polk—M. I. Olsen
 Polk—H. J. Smith
 Poweshiek—S. D. Porter
 Sac—L. B. Amick
 Scott—W. C. Goenne
 Sioux—L. R. Hegg
 Tama—H. S. Bezman
 Taylor—G. W. Rimel
 Van Buren—L. A. Coffin
 Wapello—C. A. Henry

Warren—E. E. Shaw
 Washington—E. D. Miller
 Wayne—A. E. Davis
 Webster—E. M. Kersten
 Woodbury—C. T. Maxwell
 Woodbury—F. D. McCarthy
 Worth—S. S. Westly
 Wright—G. E. Schnug

ALTERNATES

Davis—C. H. Cronk
 Decatur—K. R. Brown
 Humboldt—C. A. Newman
 Jasper—J. W. Billingsley
 Louisa—J. H. Chittum
 Monroe—C. C. Fowler
 Plymouth—M. J. Joynt
 Pocahontas—W. F. Brinkman
 Polk—R. L. Parker
 Polk—A. L. Jenks
 Pottawattamie—C. V. Edwards
 Ringgold—E. J. Watson
 Story—Bush Houston
 Winneshiek—R. M. Dahlquist

OFFICERS

President—J. E. Reeder
 President-elect—N. G. Alcock
 Secretary—A. B. Phillips
 Trustee—W. A. Sternberg
 Trustee—B. T. Whitaker
 Trustee—L. R. Woodward
 Councilor—C. H. Cretzmeyer
 Councilor—J. B. Knipe
 Councilor—R. N. Larimer
 Councilor—E. F. Beeh
 Councilor—J. C. Hill
 Councilor—H. A. Housholder
 Councilor—C. A. Boice
 Councilor—E. B. Howell
 Councilor—J. G. Macrae
 Councilor—W. S. Reiley

The Speaker: Next is the approval of the minutes of the 1948 Wednesday Morning Session.

Dr. Boice: I *move* the minutes be approved as printed in the July Journal.

[*The motion was seconded, put to a vote and carried.*]

The Speaker: Next is the president's address. I do not need to introduce him, because you elected him.

President Reeder: Mr. Speaker, members of the House of Delegates, I must admit this has been

a pretty rough year with our socialized medicine problem and also other problems over on "the hill," with reference to repeal of our Basic Science Law. There has been little time in which to practice medicine.

I was thinking that 20 years ago a president had a couple of meetings with the program committee, and at the end of his year he put on his meeting, and everything was very satisfactory. Today it is very different. You have to devote much time to outside activities. We are certainly in politics right up to our necks, and we are in the insurance business, whether we like it or not, although I think it is one way we have of saving our way of life.

[President Reeder then read his address, which appeared in the June Journal.]

President Reeder: I now have the privilege, members and delegates, to introduce the president-elect, Dr. Alcock.

President-Elect Alcock: I wish to endorse the things that Dr. Reeder has recommended, and particularly the increase in dues. We must have more money. My talk to you this evening is going to be very, very short and, I hope, to the point.

[President-Elect Alcock read his address, which also appeared in the June Journal.]

[President-Elect Alcock resumed the chair as Speaker.]

The Speaker: Here my troubles begin with parliamentary procedure. Next are reports of officers, and first we will have that of Secretary Phillips.

The Secretary: Mr. Speaker, members of the House of Delegates and guests, the roll call shows 57 delegates, 14 alternates and 16 State Society officers have registered by signed cards.

The reports of the officers, standing and special committees of the House of Delegates have been published in the Handbook. With the exception of the Committee on Constitution and By-Laws, that on Necrology, and the Legislative Committee, I *move* that those reports be accepted as printed.

Dr. Sternberg: I *second* the motion.

The Speaker: All those in favor say "aye"; contrary "no." *The motion is carried.*

Reports of Officers

REPORT OF THE SECRETARY

House of Delegates, Iowa State Medical Society:
 Herewith is the secretary's report for the year 1948:

Membership

The membership record of each county will be found in the tabulated forms on the following page. Although we gained about fifty members more than we had in 1947, we are still short fifty of the high figure attained at the start of the war. This is probably due to fewer physicians locating in the state, plus a loss from death.

To look at the figures more closely, we have 2,426

active members; this figure includes 174 life members and 86 whose dues were waived either for military service or because they were serving a residency. We have 151 eligible doctors who are not members; 52 who are not eligible for membership; and 122 retired physicians. Our membership percentage is 94 per cent.

One Hundred Per Cent Counties

The number of 100 per cent counties has fallen off a great deal since 1946 when there were 58 with a perfect record, but this is due in part to the fact that new doctors locate in the county during the

year and do not join until they have been there for some time. Possibly the counties do not invite them to become members until the start of the new year. Whatever the cause, there were only 43 counties with 100 per cent membership in 1948. They are as follows:

Adair	Hamilton	Poweshiek
Adams	Humboldt	Ringgold
Appanoose	Louisa	Sac
Audubon	Lucas	Scott
Butler	Lyon	Shelby
Calhoun	Madison	Story
Cerro Gordo	Mahaska	Tama
Chickasaw	Marion	Taylor
Clay	Montgomery	Van Buren
Davis	Muscatine	Wayne
Delaware	O'Brien	Webster
Dickinson	Osceola	Woodbury
Emmet	Palo Alto	Worth
Floyd	Pocahontas	Wright
Greene		

1948 MEMBERSHIP RECORD

County	Members	Eligible	Ineligible	Not in Practice or Retired	Percentage
Adair	8	.....	.....	.....	100
Adams	5	.....	.....	.....	100
Allamakee	10	1	.....	1	90
Appanoose	15	.....	.....	1	100
Audubon	7	.....	.....	.....	100
Benton	19	3	.....	.....	86
Black Hawk	77	2	3	.....	97
Boone	19	2	1	.....	95
Bremers	17	1	.....	.....	94
Buchanan	14	2	2	.....	87
Buena Vista	20	1	.....	.....	95
Butler	12	.....	.....	.....	100
Calhoun	18	.....	.....	.....	100
Carroll	23	1	.....	1	95
Cass	14	1	1	1	93
Cedar	8	4	.....	.....	65
Cerro Gordo	56	.....	2	.....	100
Cherokee	12	4	.....	5	75
Chickasaw	13	.....	.....	.....	100
Clarke	5	1	1	1	83
Clay	12	.....	1	1	100
Clayton	16	3	4	.....	84
Clinton	48	2	3	1	97
Crawford	10	4	1	1	71
Dallas-Guthrie	32	1	.....	1	91
Davis	13	.....	.....	2	100
Decatur	7	2	.....	.....	77
Delaware	10	.....	.....	2	100
Des Moines	40	1	.....	4	97
Dickinson	8	.....	.....	.....	100
Dubuque	69	5	.....	1	93
Emmet	13	.....	.....	.....	100
Fayette	25	5	.....	5	83
Floyd	17	.....	1	1	100
Franklin	10	3	.....	1	78
Fremont	10	1	.....	.....	90
Greene	21	.....	.....	1	100
Grundy	13	1	.....	.....	92
Hamilton	16	.....	.....	1	100
Hancock-Winnebag	19	2	1	1	90
Hardin	20	2	1	4	91
Harrison	11	3	1	2	80
Henry	15	1	1	.....	94
Howard	9	1	.....	.....	90
Humboldt	10	.....	.....	.....	100
Ida	11	1	.....	1	90
Iowa	10	3	.....	2	76
Jackson	14	4	.....	1	77
Jasper	19	7	.....	1	73
Jefferson	16	2	.....	.....	89

County	Members	Eligible	Ineligible	Not in Practice or Retired	Percentage
Johnson	155	21	.....	4	88
Jones	12	3	.....	.....	80
Keokuk	12	6	.....	.....	66
Kossuth	14	2	2	.....	90
Lee	37	3	2	3	92
Linn	118	1	2	5	99
Louisa	5	.....	.....	2	100
Lucas	11	.....	.....	1	100
Lyon	7	.....	.....	1	100
Madison	6	.....	.....	.....	100
Mahaska	25	.....	.....	1	100
Marion	25	.....	.....	.....	100
Marshall	37	1	.....	1	97
Mills	8	1	.....	1	80
Mitchell	11	2	.....	1	78
Monona	11	1	.....	1	91
Monroe	11	1	.....	1	91
Montgomery	16	.....	.....	.....	100
Muscatine	27	.....	.....	4	100
O'Brien	20	.....	.....	1	100
Osceola	9	.....	.....	.....	100
Page	26	2	.....	9	92
Palo Alto	15	.....	.....	.....	100
Plymouth	13	4	.....	1	76
Pocahontas	8	.....	1	1	100
Polk	297	2	10	13	99
Pottawattamie	63	7	2	2	90
Poweshiek	16	.....	.....	.....	100
Ringgold	5	.....	.....	.....	100
Sac	12	.....	.....	.....	100
Scott	94	.....	3	6	100
Shelby	7	.....	.....	1	100
Sioux	16	3	.....	.....	84
Story	35	.....	1	.....	100
Tama	17	.....	.....	2	100
Taylor	6	.....	.....	.....	100
Union	14	1	.....	1	92
Van Buren	5	.....	1	2	100
Wapello	39	3	1	1	91
Warren	10	1	.....	1	90
Washington	24	2	.....	.....	92
Wayne	8	.....	.....	1	100
Webster	46	.....	.....	1	100
Winnebago	13	1	.....	1	92
Woodbury	118	.....	5	4	100
Worth	6	.....	.....	.....	100
Wright	20	.....	.....	3	100
Total	2,426	151	52	122	94

Number of One Hundred Per Cent Counties by Districts

First	2	Sixth	2
Second	5	Seventh	1
Third	8	Eighth	4
Fourth	2	Ninth	6
Fifth	5	Tenth	5
Eleventh	3		

Location of New Physicians

There are still many communities in Iowa wishing a physician, and there are doctors looking for locations. The central office has tried to act as a clearing house in providing information to both groups. We have asked the communities to provide us with complete information about the town, stressing its good points so that it may attract a physician's notice. We have also furnished the contact people with a list of physicians looking for locations, feeling that a letter from the community would add much more weight to ours, which merely sets forth the advantages of the different places. More

and more the smaller communities are realizing the necessity for having office and house space available. It still is not possible to place a physician in each community wishing one. Probably it never will be, but it does seem that more of the younger physicians are realizing the advantages of general practice and are looking for that type location rather than a place in a city.

Cooperation with Governmental Agencies

During 1946 and 1947 we thought we had put procurement of physicians behind us, but passage of the new selective service act in 1948 brought a request for medical examiners for draft boards. A special committee appointed by the House of Delegates in April met twice with Selective Service officials and then asked the help of former service physicians in implementing the provisions of the draft. This was forthcoming in every county but one.

We are now being asked to encourage young physicians to accept responsibility for service as medical officers in the Army and Navy. Work on this is just beginning and it is impossible to tell what the program will entail.

Financial Report

Collection of all funds due the Society is the responsibility of the secretary. He in turn transfers them to the treasurer. This has been done and the treasurer's report will give the detailed statement of income and expenditures.

Allan B. Phillips, Secretary

REPORT OF THE TREASURER

The report of the Treasurer for the year 1948 is hereby presented to the House of Delegates for its information. As the Trustees remarked in their report last year, it was hard to foresee what 1948 would mean to the Society in a financial way, since income seemed to be decreasing somewhat and all expenses were increasing. The outcome was that the Society suffered a net loss of \$4,733.23.

The Trustees reported that exhibit space at the annual meeting was selling slowly at the time the report was written. In the end, however, all space was sold and there was a net profit of over \$400 from that source. Income from dues was \$135 less than in 1947; from advertising it was \$2,416 less, although reprint income showed an increase of \$630. Income from the Speakers Bureau showed an increase of \$370, but the total income was \$900 less than in 1947.

As compared to the decrease in revenue, all departments of the Society except the Trustees showed an increased cost. Net increase in expenditures for the year was \$11,400, or a total of \$4,733.23 more than was taken in in receipts.

A breakdown for the year is shown in the following figures:

INCOME:

Annual session	\$ 5,680.70
Dues	32,194.25
Interest on bonds	1,268.75

Interest on savings	20.12
Journal	
Advertising	\$16,581.22
Reprints	2,317.69 18,898.91
Speakers Bureau	953.09
Miscellaneous	197.66
TOTAL INCOME	\$59,213.48

EXPENDITURES

Administrative miscellaneous	\$ 2,343.93
Annual session	4,490.44
Council	544.45
County society services	85.43
General salaries	8,373.69
Journal	
Salaries	\$ 4,426.26
Printing and engraving	16,090.86
Reprints	2,081.20 22,598.32
Legislative committee	4,500.00
Medicolegal committee	1,654.37
Medical service and public relations	10,509.68
Other committees	1,800.00
Rent and office supplies	3,907.36
Speakers Bureau	
Salaries	\$1,887.19
Travel expense	1,084.96 2,972.15
Trustees	166.89
TOTAL EXPENDITURES	\$63,946.71

NET LOSS FOR YEAR.....\$ 4,733.23

Cash on hand at the first of the year in three bank accounts totalled \$8,052.91, while the Society held \$49,500 in bonds. This made a total reserve of \$57,552.91. Subtracting the net loss for 1948 from this figure leaves a reserve as of January 1, 1949, of \$52,819.68. This was comprised of the following items:

Secretary's account,	
Central National Bank	\$ 122.74
Treasurer's account,	
Bankers Trust Company	819.43
Savings Account,	
Bankers Trust Company	2,377.51
Treasury Bonds	19,000.00
United States Savings Bonds, Series D	3,000.00
United States Savings Bonds, Series G	27,500.00

TOTAL CASH AND BONDS\$52,819.68
N. Boyd Anderson, Treasurer

REPORT OF THE BOARD OF TRUSTEES

The Board of Trustees held seven meetings during 1948 with all members and other State Society officers and committee chairmen present. As the work of the Society becomes more complex, it becomes more and more necessary for the Trustees to have an intimate knowledge of the workings of the various departments and for that reason many joint meetings have been held. In addition to scheduled board meetings, the Trustees have met as part of the

Executive Council with other committees, particularly the Committee on Medical Service and Public Relations, some four or five times in the year. This integration of activity cannot help but work for the good of the Society as a whole, because it draws so many doctors into the planning and activation of policies for the profession.

As the activity of the Society increases, its financing becomes a greater problem. In a business, increased activity is supposed to stimulate sales and promote increased income. In our type of organization where the main source of revenue is dues from members, we are dependent upon the number of members and the amount of dues. If we do not increase the dues, we cannot hope for much increase in income, because the number of doctors does not increase greatly. Our membership is slowly climbing back to the figure of 2,480 achieved just at the start of the war, but it may take some time to reach it. Income from dues in 1947 was \$32,330 and in 1948 only \$32,194.25, a slight loss. We hope that dues in 1949 may bring in \$33,000.

Another source of income is from the annual session. During the last ten years we have built up the annual meeting from one which cost the State Society money to one which brought in some profit. In 1948 the profit was \$1,190.26. In 1949 the picture will be different. We have thirteen less commercial spaces available than last year, and the best we can hope for is to break even on income and expense.

The Journal presents another problem. During the war commercial companies spent large sums in advertising because they lacked salesmen, and they utilized the printed pages of the medical journals to bring their products before you. Retrenchment has been evident for the past two years and is even more marked for 1949. Advertising brought in \$3,000 less in 1948 than it did in 1947. To make the picture worse, labor and paper costs have steadily increased. As a result, publication of the Journal cost each member \$1.50 in 1948. In 1945 it cost each member about 3 cents; in 1946 and 1947 it showed a profit. The high year was 1946 with an estimated profit of \$1,475. Profit in 1947 dropped to \$251.63, and the deficit in 1948 was \$3,699.41. We estimate the deficit in 1949 will be about \$6,600.

Net cost of the Speakers Bureau for 1948 was \$2,019, or about 80 cents per member. Miscellaneous administrative costs amounted to \$2,343, or about \$1 per member; rent and office supplies to \$3,907 (\$1.80 per member); general salaries to \$8,373 (\$3.50 per member); medicolegal defense to \$1,654 (70 cents per member); legislative committee to \$4,500 (\$1.90 per member); medical service and public relations to \$10,509 (\$4.50 per member). Add to this the other committees' expenses and the estimate runs about \$16.75 per member from dues. With dues of \$15, the deficit for 1948 was an actual figure of \$4,733.23.

It should be remembered that the House of Delegates voted to pay \$2,500 for printing a cancer manual. This was done and is part of the reason for the deficit. A great increase in the cost of

medicolegal defense was another reason, with the third being the Journal deficit.

The budget for 1949 has been set up by the board, and the anticipated deficit is \$16,560. The budget is an estimate of anticipated income and of estimated expenditures. With the many demands upon the State Society office, the costs have risen. We have already explained that Journal costs are greater and income less. Travel expense is a big item and, with committees active and functioning, there is more travel expense. One person has been added to the office personnel on a half-time basis to help with the added work.

In view of the rising costs of conducting the State Society work and the necessity for continued activity to uphold the ideals and objectives of the medical profession, the Trustees recommend that the State Society dues be raised to \$25. The by-laws, Chapter X, Section 1, state that a per capita assessment as authorized by the House of Delegates on the membership of the component societies is made the annual dues of the Society. Consequently, the Trustees ask that the House of Delegates authorize a per capita assessment of \$25.

In closing this report, the Trustees wish to restate their position. They are entrusted with the guardianship of the Society funds. "All motions or resolutions appropriating money shall specify a definite amount, or so much thereof as may be necessary for the purpose indicated, and must be approved by the Board of Trustees before being presented for final action to the House of Delegates." (Chapter X, Section 3.) The Board, however, feels that Society funds must be used in the most effective manner and when needed. Its main concern has been and will be to get the utmost value possible from each expenditure. It does not regret the deficit which occurred in 1948 because the expenditure for medicolegal defense which occasioned part of it resulted in a most important decision for the profession; the cancer manual is an excellent book and well worth the money; and the Journal is necessary to the doctors of Iowa. The Board does feel, however, that it would not be wise to deplete the reserves too greatly. It is inevitable that there will be another deficit in 1949, and for that reason the Board recommends that dues be increased to the \$25 figure.

Walter A. Sternberg, Chairman
Lee R. Woodward
Ben T. Whitaker

REPORT OF THE CHAIRMAN OF THE COUNCIL

The Council, as a part of the Executive Council, has met four times since the last annual session, and these meetings have been most valuable, because opportunity was thus given to talk over the problems of the State Society.

One meeting was devoted to a discussion of the advisability of an overall insurance setup. The delegates to the American Medical Association were present and they went to the St. Louis session with some idea of what it was all about.

It is my recommendation that the Executive

Council meet not less than four times a year, exclusive of the annual session, at which time the problems of the State Society can be discussed intelligently with the various committees. The time has long passed when the State Society can be active only a few days in April.

The Council has recently gathered statistics concerning available locations for country practitioners. Thirty-eight possible locations were reported. One question asked of every deputy councilor in the state was: Do you think that a town with no doctor within eight or ten miles of available services is a good location? The answer was almost invariably no.

Clyde A. Boice, Chairman

REPORT OF THE FIRST COUNCILOR DISTRICT

The First District has had a very busy and active year. Not only did we have our regular monthly programs in most of the counties, but many joint meetings were held. One three county meeting was held at Postville, while another three county affair was held at Decorah. In addition to these, two meetings of the complete First District were held and well attended. These district meetings were held to do everything possible to combat socialized medicine. It is to be hoped that we accomplished our purpose, but there is plenty of reason for doubt about this.

Special meetings in many of our counties have been held to inform all doctors in regard to Blue Shield. Many questions from all parts of the district are coming in, however, asking when Blue Shield insurance will be available in their counties. This I, too, am asking of anyone who can answer it.

The doctors in the First District all seem to be just as busy as during the war years. The complete number of doctors in the district is very little greater than during war years. Some counties have scarcely changed. The wear and tear have been taking their toll, and it is showing on many of us older men.

I believe the entire First District is looking forward to a fine state meeting in April.

L. L. Carr, Councilor

REPORT OF THE SECOND COUNCILOR DISTRICT

The Second Councilor District of the State Medical Society is functioning like a well oiled machine. We have no suggestions and no complaints.

C. H. Cretzmeyer, Councilor

Butler County—The Butler County Medical Society did not have any special projects during the past year. It did, however, have 100 per cent membership. The doctors had dinner meetings once a month during the summer, meeting at the same time as the Woman's Auxiliary. Separate meetings were held following dinner. Dr. Carl F. Roder of Dumont has moved to Colorado, and his practice has been taken over by Dr. M. D. Enna.

Bruce Ensley, Deputy Councilor

Franklin County—Our activities are limited to a regular staff meeting at the hospital once a month. All members of the Franklin County Medical Society attend, as well as doctors from other counties who bring patients to this hospital. There is a business meeting of the County Society once or twice a year.

Seth G. Walton, Deputy Councilor

Hancock-Winnebago — The Hancock-Winnebago Medical Society held only one meeting during the past year. This was held December 23, 1948, at Forest City. At this meeting it was decided to hold one meeting every three months during the coming year and to try to obtain some outside speakers. Hancock County participated in an immunization program in cooperation with the schools during the year.

C. V. Hamilton, Deputy Councilor

Humboldt County—The Humboldt County Medical Society has again had 100 per cent membership. Also, every doctor in the county has paid the 1949 contribution to promote the publicity program of the American Medical Association.

Ivan T. Schultz, Deputy Councilor

Kossuth County—This has been a big year for the people of Kossuth County as well as for the medical profession. The year 1948 will always be remembered as the year the St. Anne Hospital took shape and actually began to show the results of our labor. Most of the year's business was relative to the hospital. It is hoped that it will be ready for patients on or before July 1, 1949.

J. G. Clapsaddle, Deputy Councilor

Worth County—Worth County maintained 100 per cent membership during the past year. There was no emigration or immigration of physicians, and there were no deaths in the profession. Our leading project of the year was cooperation with various organizations and agencies in securing a full time county nurse, who has now taken over this important work for the first time in the county's history.

S. S. Westly, Deputy Councilor

Wright County—The Wright County Medical Society has a membership of twenty-one physicians. Only three meetings were held during the past year. None of our members has moved from the county, and no new members have been voted into the Society. We regret to have to report the loss of one of our most valued members, Dr. Erle D. Tompkins, who died March 26, 1948. He was 73 years old and had practiced medicine in Clarion since his graduation.

The immunization program against contagious diseases has again been carried out under the supervision of the Wright County Medical Society, with the cooperation of the county superintendent of schools, the teachers, the county and school nurses, and the parents. This has been a yearly procedure for the past twelve or fifteen years with the result that the ordinary contagious diseases are almost a thing of the past. There have been twenty-six new cases of poliomyelitis from this county with, I believe, one death. We all hope that a means of prevention

of this disease may soon be discovered which will be as positive a means of prevention as those available against smallpox and diphtheria. The society for the prevention of tuberculosis has not been as active in this county during the past year as heretofore. However, the American Cancer Society, under the efficient local leadership of Dr. S. P. Leinbach of Belmond and Mrs. Lynn Thompson, R. N., of Clarion, is doing good work in an educational way along cancer lines. Much information concerning the early symptoms of this disease is being promulgated and no doubt many will be relieved, if not entirely cured, as an end result of this education. This activity is also under the direction and supervision of the Wright County Medical Society in conjunction with the American Cancer Society, Inc.

J. H. Sams, Deputy Councilor

REPORT OF THE THIRD COUNCILOR DISTRICT

It is my pleasure to report that from the standpoint of organized medicine the Third District is in fine shape. Most of the nine county medical societies can boast of having 100 per cent of the eligible practitioners of their counties as members in good standing. All of the various counties hold one or more meetings each year and several of them have monthly meetings.

In a recent survey of the counties of my district, I ascertained that there was now no shortage of doctors, that all sections of the district were amply supplied with physicians, and that no one was suffering from lack of medical care.

In addition to the various scientific meetings held throughout the year by the various county societies, the Upper Des Moines Medical Society, as usual, held its summer meeting at Lake Okoboji. This was very widely attended by the men from the district as well as other practitioners from northern Iowa and southern Minnesota.

The threat of socialized medicine which hangs over us all is keenly felt by the men of this district, and with practically no exception they were ready and willing to pay the \$25 assessment levied by the American Medical Association to help fight this menace, and they stand ready to do all in their power to ward off this threat.

My deputy councilor for O'Brien County, Dr. Walter R. Brock of Sheldon, departed this life in September of last year. Dr. Brock will be greatly missed not only in this district but throughout the state as he was a tireless worker for organized medicine. Dr. Thomas D. Kas of Sutherland has been appointed as his successor as deputy for that county.

All in all, I think this has been a highly successful year for the men of this district, and I want to take this opportunity to thank my deputies and the other physicians of the district who have cooperated with me in every endeavor I have made for the cause of organized medicine.

James B. Knipe, Councilor

REPORT OF THE FOURTH COUNCILOR DISTRICT

Reports from the deputy councilors of the constituent counties of the Fourth District continue to show excellent medical feeling. Younger men have returned to or have located in almost every county, so that the criticism of lack of the availability of doctors which was prevalent during the war has provided its own solution. The younger men themselves are interested in their respective medical societies, and most of them seem to be more pleased to be medical practitioners than to wish to return to any sort of regimented practice.

In most of the counties, the county societies have been reasonably active in the matter of having meetings. It would seem that one of the most active topics of conversation at the meetings has been discussion of the American Medical Association program, and no reports of criticism of the plan have been received. Unfortunately there is little concrete information available to individual physicians, and the plan of the Woodbury County Society of having a legislative committee to keep in touch with medical legislation at all political levels would seem to be a good one. It is disquieting that this committee has brought to light much anti-medical information and material related to medical legislation of which the rank and file of the members might otherwise not have been cognizant. It has been felt that such a committee would be of value to every county society. Its functions might include careful scrutiny of actions of the State Department of Health, especially in its relation to the United States Public Health Service, analyses of the present epidemic of fund raising campaigns by lay groups for health purposes, and examination of the expenditures of money so raised, as well as the relaying of information in regard to national legislation. The medical society might then be alerted in a fashion which to date has not been general.

Hospital construction and planning are present in almost every county. It is hoped by several groups that some guarantee of control of the hospitals by local and state authorities might be obtained, since fear of the possibility of federal control of the hospitals at a later date has arisen.

One cannot help but get the impression from the various reports that the State Medical Society will of necessity be forced into a greater degree of political participation than was formerly thought reasonable or even ethical.

R. N. Larimer, Councilor

REPORT OF THE FIFTH COUNCILOR DISTRICT

Throughout the Fifth District much interest is being shown in the National Health Program. So far very little has been done to combat this evil. The difference of opinions of those for and against the national plan are as far apart as can be. The American people have been given practically no news of the controversy of opinions. It is the responsibility

of the government and medicine to educate the public of the grave and complex problems of socialized medicine.

E. F. Beeh, Councilor

REPORT OF THE SIXTH COUNCILOR DISTRICT

In the Sixth District we wish to express our deep appreciation of those working for satisfactory legislative measures in our state. Recognition of our Committee on Medical Service and Public Relations for its untiring efforts is in order. The most efficient public relations individual is the physician himself; his contact with the public, and particularly with the patients themselves, is ideal for the spread of medical doctrine. The physicians in this district are active in public service, being energetic in civic enterprises. In our new social relationships in medical practice let us not forget the potent force of the Woman's Auxiliary. In the county societies the secretaries carry a heavy load. They are the dynamos of the medical organization as a whole.

During the past year most excellent scientific programs have been presented at monthly or bimonthly intervals in Marshall and in Black Hawk Counties. Two or three counties have met to elect officers and to pay dues. One county with a rather small membership had scientific meetings with sound movies supplied by medical film libraries. Another county had six scientific meetings in 1948 and an all-day clinic in June. Black Hawk County entertained the cancer institute at Waterloo. This was the Iowa Division of the American Cancer Society. Four very important discussions on cancer were presented.

The Blue Cross and Blue Shield continue to grow in our midst.

Health education programs are prevalent throughout our district. These are carried out through the schools and industrial plants. Our people have accepted the preventive medical program.

Hospitals in the district are taxed to their capacity. This places a heavy load on the nursing service and there are not enough nurses to go around. However, the hospital situation in the Sixth District is satisfactory except in the counties of Tama, Grundy and Benton.

At the request of Dr. C. A. Boice, Chairman of the Council, a Sixth District survey of locations available for country practitioners has been conducted through the deputy councilors of the district. Five or six fairly good locations for country practitioners may exist in the district, but our better judgment is that there are but one or two. Information received from one of the larger towns of the district was to the effect that if the new doctor would respond to night and Sunday calls and would care for obstetrics there would be room for him. Many young physicians have located throughout the Sixth District since the last war. In so far as we can learn, they are giving good account of themselves. Most of them have applied for membership in the county in which they have located.

James C. Hill, Councilor

REPORT OF THE SEVENTH COUNCILOR DISTRICT

A survey of conditions in the Seventh District shows a decided improvement over things as they were during the war. The several counties are having regular meetings with the exception of two, and these have at least one or two meetings a year. In all counties better interest is being shown in the inoculation of school children and preschool children against the preventable diseases, and in some of the more populated counties the employment of an active county nurse has been of great benefit.

There are still several small towns that have no resident physician, which in itself is discouraging to the layman and might have its influence in promoting the desire for socialized medicine.

The Cancer Clinics located in the larger centers—Clinton, Dubuque, Cedar Rapids, and Iowa City—show an increase in patients and are proving satisfactory as case finding help to the local referring physicians.

Johnson, Linn, Dubuque and Clinton Counties have been presenting many excellent scientific programs, and these have been very well attended by the physicians from the nearby counties.

H. A. Housholder, Councilor

REPORT OF THE EIGHTH COUNCILOR DISTRICT

Des Moines County—The Des Moines County Medical Society held ten regular meetings during the year, as is the custom, not holding meetings during the summer months of July and August. The programs for these meetings consisted of several excellent scientific presentations by well known local and out-of-state physicians. Also, one meeting was devoted to Iowa Medical Service, another to the mental health program of Des Moines County, and another to the establishment of a county tuberculosis clinic. The annual picnic was held in June. As a whole, our year has been very successful.

During the year we have been fortunate in having come to our community five new members: Drs. Robert Allen, Robert Rowley, George Wilkinson, Robert Bell and Harvey Eastburn. We regrettably report the loss of a senior member and beloved friend, Dr. Frank M. Tombaugh of Burlington.

It also might be of interest that locally we have a committee consisting of five men who are responsible for reviewing literature on all phases of socialized medicine and allied conditions and getting the literature to the members of the society, who in turn read each article and return it to the committee. We also have a group of speakers who are appearing before various organizations, and we have started, at every meeting where they speak, to ask those present to write their congressman and senator opposing the socialistic move. It may be of no value, but we at least feel that we are exerting an effort. In addition, this committee has a group of some twenty women who go out and contact organiza-

tions which would not be accessible to the physicians. We furnish them the material and they in turn present the papers. Also, each week a bulletin of all briefed literature goes to each member of the medical and dental professions locally. We plan this year to enlarge it to include the druggist and nursing professions.

Frank G. Ober, Deputy Counselor

Henry County—The Henry County Medical Society has had a very successful year, having held regular meetings the third Friday of each month. Meetings have been both scientific and social. A Woman's Auxiliary has been organized, which has started functioning in grand style.

Two new men have located in the county, Dr. John Widmer at Winfield and Mr. Kenneth Beebe with his brother John in Mount Pleasant.

Regular staff meetings have been started at the Henry County Memorial Hospital with W. A. Sternberg, M. D., as Chief of Staff.

There have been no deaths in the profession this year.

J. Stewart Jackson, Deputy Counselor

Lee County—The Lee County Medical Society held quarterly meetings during 1948, with two being held in Keokuk and two in Fort Madison. The scientific programs at these meetings were of outstanding quality and the Society is indeed grateful to its guest speakers. Four new members were admitted to membership during 1948: Drs. Frank Lyman, Rex Speers, E. C. Heinmiller and G. K. Arney.

R. L. Feightner, Deputy Counselor

Louisa County—The Louisa County Medical Society had 100 per cent membership again in 1948, and six meetings were held during the year. Since the total membership is only five, however, we have been unable to import scientific speakers, but we have kept alive the professional spirit.

J. H. Chittum, Deputy Counselor

Muscatine County—The Muscatine County Medical Society has had but four meetings during the year 1948 and none of them was scientific. It is the feeling of the members that their number, and therefore possible attendance, is too small to justify bringing in speakers. They have, however, pledged themselves to support district meetings in this vicinity in larger numbers and for the most part not obtain scientific programs for themselves.

There were two new members taken into the county society in 1948, and there were no deaths.

The members have supported the cancer drive as individuals, have supplied speakers for local events, and have contributed \$100 to the National Physicians Committee.

C. P. Phillips, Deputy Counselor

Scott County—Our Society has made a special effort to furnish speakers for lay groups, and we feel this is a great method of educating the public.

The Society is still going on at the usual pace, good dinner meetings monthly with good outside programs mixed up with home talent. Our dinner,

paid for by the Society, is well attended. Our business is disposed of by an executive committee and that way does not become boresome.

Each year we have to go through arrangements for the county setup, isolation hospital, etc. The isolation hospital has a board of four physicians plus the five county supervisors and is thus taken care of quite independently of other organizations. Our isolation hospital is a grand unit in the erection of which the federal government participated. It is open to all the counties of this community at reasonable rates and at no charge for county cases. The county tuberculosis hospital, Pine Knoll, is on a little different basis. It has its own elected board and works with the approval of the board of supervisors.

The Scott County Medical Society's arrangement to take care of the poor has proved so successful that it is to be continued. The system of your own choice of physician started to function the first day of May, 1948. It has proved satisfactory in every way to Scott County and is praised by the University Hospital at Iowa City. Every patient may have the doctor of his choice. All referred Iowa City cases are approved by the county physicians. Practically all the doctors take part.

A. P. Donohoe, Deputy Counselor

Van Buren County—There was only one meeting of the Van Buren County Medical Society last year and that was the annual meeting held on December 14, 1948. At that meeting the assessment of \$25 made for the American Medical Association was approved. The members also voted to pay their wives' dues to the Woman's Auxiliary. Since there are now four physicians in the Society, it is planned that quarterly meetings will be held.

L. A. Coffin, Deputy Counselor

Washington County—The Washington County Medical Society held six scientific meetings during the year. Guest speakers at five of these meetings were from the State University of Iowa College of Medicine, and their discussions covered subjects of particular interest to the members. The sixth meeting was devoted to the subject of cancer, the meeting being held with the Cancer Institute. The Society lost one member by death, Dr. W. L. Alcorn of Washington. He was delegate of the Society from 1934 to 1947. Another member, Dr. J. S. Newton, of Washington, moved to Lewiston, Idaho. However, three physicians—Dr. C. W. Beckman of Kalona, Dr. G. J. Nemmers of Washington, and Dr. Mary Rushia of Riverside—were elected to membership during the year.

Enos D. Miller, Deputy Counselor

REPORT OF THE NINTH COUNCILOR DISTRICT

There is not much to report from the Ninth District. Most of the county societies have had one or more special meetings. Wapello County has had a meeting each month since September and has had some outstanding speakers. Usually several members of the nearby counties have attended these meetings.

At the request of Dr. Boice, a survey of the district was made in regard to hospital facilities and medical personnel. There appears to be an ample number of hospital beds in this district. There are a few localities which could probably support a few more doctors, but there does not appear to be any critical shortage of medical personnel.

Most of the members of the various societies are reluctant to pay the special assessment of \$25 recently made by the American Medical Society. The general feeling is that the public relations of the American Medical Association have been very bad and, unless there is some positive program adopted and widely distributed to the profession and the public which will correct the false impressions that have been advocated by the national Social Security Department in regard to adequate medical care and unreasonable cost under the private practice of medicine, physicians will not readily subscribe to future assessments.

E. B. Howell, Councilor

REPORT OF THE TENTH COUNCILOR DISTRICT

In relation to District Number Ten, there have been very few startling or different activities. The physicians in this district have given their time without stint to vaccinations and prophylactic measures as requested by the local communities.

The major share of the societies meet at least four to six times a year, some meeting monthly. When a county society consists of three men, as two of them do, it is not conducive to stimulating society meetings.

A very acceptable district lecture course was enjoyed by most of the district doctors last spring. This course was arranged and put on by the Speakers Bureau of the State Society.

As regards hospitals, we have five counties which are to get new hospitals, four under the federal grant and one by endowment. The three counties already have hospital facilities, and this will leave but one county in our district that does not have adequate hospitalization.

In the course of the year, there have been several new physicians locate in the district. There are, of course, many desirable locations yet to be filled.

James G. Macrae, Councilor

REPORT OF THE ELEVENTH COUNCILOR DISTRICT

The past year has been very quiet in our circles in the Eleventh Councilor District. Three of our counties have had regular monthly meetings with excellent programs and good attendance. The other counties have had irregular meetings with good programs and good attendance at most of the meetings.

I have found that it takes a lot of time and energy to maintain interest in the societies. This is one of the reasons we find ourselves slipping in our influence politically. Each one tries to make himself believe that everything is all right, let the other fellow do it, but many times it does not get done.

We have in our district several communities needing a doctor. I think the clinical practice of medicine is not sufficiently stressed in our schools. Home practice is so much different from hospital practice that many doctors believe home practice cannot be done satisfactorily. It is often difficult, of course, but hospitals are usually near and those needing hospitalization can be readily moved.

W. S. Reiley, Councilor

Reports of Standing Committees

REPORT OF THE COMMITTEE ON CONSTITUTION AND BY-LAWS

Last year your committee recommended the following change in the Constitution: Amend Article VIII, Section 2, to read as follows: "The president-elect and vice-presidents shall be elected for a term of one year, the secretary and treasurer for three years, and the councilors for three years—the councilors being divided into classes so that four shall be elected each year except in every third year when only three shall be elected. No councilor shall serve for more than three successive terms. The trustees shall be elected for three years, one each year. All these officers shall serve until their successors are elected and installed. The president-elect shall enter upon the duties of the presidency on the last day of the annual session succeeding that in which he is elected."

Since this was an amendment to the Constitution, it was presented last year and is up for vote this year.

In addition, the Committee on Constitution and By-Laws has had presented to it some proposed changes in the Constitution and By-Laws. These changes have been discussed by the Council and the Board of Trustees and were presented to the committee for referral to the House of Delegates.

The committee has reviewed these and brings in the following report: Amend Article VII, Section 2, to read as follows: "The place for holding each Annual Session shall be fixed by the House of Delegates but authority for setting the time of the meeting may be delegated to the Committee on Arrangements."

Amend Article VIII, Section 1, to read as follows: "The officers of this Society shall be a President, two Vice-Presidents, a President-Elect, a Secretary, a Treasurer, a Speaker and a Vice-Speaker, eleven Councilors and three Trustees."

Amend Article VIII, Section 2, to read as follows: "The President-Elect, Vice-President, Speaker and

Vice-Speaker shall be elected for a term of one year. . . ."

The foregoing amendments relate to the Constitution and are presented for reading this year but cannot be voted upon before 1950. The following amendments pertain to the By-Laws and may be voted upon at the second meeting of this House after having been presented for reading April 18.

Amend Chapter II, Section 1, of the By-Laws to correspond to changes being suggested for the Constitution. "The Society shall hold an Annual Session at such time as has been arranged by the Committee on Arrangements and place as has been fixed at the preceding Annual Session by the House of Delegates."

Amend Chapter IV, Section 6, of the By-Laws to read as follows: "It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body in such a manner that one-half the number, as near as may be, shall be elected each year. The term of office of these delegates and alternates shall start January 1 following their election."

Amend Chapter VI, Section 5, of the By-Laws by inserting the following sentence after the first sentence in the second paragraph. "Any proposal to appropriate funds other than for the usual running expenses of the Society and Journal shall be presented in a separate resolution."

Amend Chapter VI, Section 5, third paragraph, by adding the following phrase: "Except that should a vacancy occur in the office of President-Elect by reason of death or total incapacity of the incumbent or for any other reason, the House of Delegates shall be called into session within fifteen days to name a President-Elect." Your committee begs to ask discussion by the House on this point. It suggests that instead of calling the House of Delegates the Executive Council might be authorized to fill the vacancy.

If the House of Delegates decides to elect a Speaker and a Vice-Speaker, then Chapter VI, Section 6, should be deleted.

In view of the fact that the Constitution specifies fourteen members of the Executive Council shall constitute a quorum, and in view of the fact that it has been impossible to get quorum for the last several meetings of the Executive Council, your committee asks whether the House of Delegates would like to have the figure changed from fourteen to thirteen. We are informed that on several different occasions thirteen members have been present but action has been impossible because the number lacked one of constituting a quorum. We ask that the House discuss this and if it so desires we will present a recommendation to that effect so that the change may be voted upon next year.

John H. Henkin, Chairman
Don F. Rodawig
John D. Conner

REPORT OF THE LEGISLATIVE COMMITTEE

The report of the Legislative Committee will be given at the annual meeting, since it is impossible

to give a concrete report at the time the Handbook goes to press.

John W. Billingsley, Chairman

REPORT OF THE COMMITTEE ON MEDICAL SERVICE AND PUBLIC RELATIONS

The medical profession must stand trial this year—the indictment, "Failure to supply adequate medical care to the American people." The trial judge will be the President of the United States; the jury, Congress; the prosecution, Oscar Ewing, et al.; the witnesses, people; the penalty, if found guilty, our parole to a Washington bureau.

We have escaped many such indictments in the past, but now the cards are stacked against us. The judge has stated his prejudice, many jurors are committed to find us guilty as charged, and the prosecution is active and efficient. To date most of the witnesses testifying for our conviction have been federal employees paid by the government and using the taxpayers' money to organize and distribute their testimony. Furthermore, the prosecution, knowingly or unknowingly, is being assisted by people with communistic trends or affiliations who see in socialized medicine an opening wedge for their ulterior objectives.

Never before have we been so much in need of able counsel. Our National Physicians Committee, the Association of American Physicians and Surgeons, together with other organizations devoting their efforts toward the preservation of constitutional government and the right of free enterprise, have been our able counselors during the past few years. However, their trained staffs are limited in their activities, because they must depend on our voluntary contributions for their existence. They are increasing their activities for the emergency and must not be handicapped by the lethargy and indifference we have shown toward them in the past, or the job will be only half done.

But someone else cannot assume the whole defense for us; we still have collective and individual responsibilities as physicians if we wish to check the threatened regimentation of medicine. We must see that our patients continue to have the best medical service in the world. Since the average person believes his inability to pay for such service is more important than the quality of that service, therefore for prudence we are obligated to keep his expenses within his ability to pay and show him how in the future to budget for possible medical catastrophies involving expenses beyond his financial means, or he will invariably appeal to the benevolent government which is supposed always to be ready to provide those means. The charge of neglecting to care for the indigent or those unfortunates who are without funds for medical care must never be laid at our door, no matter how unpleasant the circumstances. Public health movements and education need our assistance and cooperation provided control of such administration is kept within the areas which they serve. We must provide, whenever possible, a better

distribution of medical facilities and especially doctors for communities now not adequately supplied. These are only a few of the criteria which we can follow lest at some future date the people will bear witness against us.

The committee reports which follow will give you some idea of how much the doctors in Iowa have done toward inducing the people not to testify against us. The task is only begun and not well done up to the present; we hope it is not too late.

Fred Sternagel, Chairman

Social Agencies

The plan of decentralizing the handling of aid to dependent children and aid to the blind has been in operation for over a year and seems to be working out with a fair degree of satisfaction.

There is no change in the handling of old age assistance.

Charles T. Maxwell, Subchairman

Insurance

During the past year Iowa Medical Service has continued a steady and fairly satisfactory growth, increasing its membership from 36,924 to 87,127 as of the end of the year. The sales have increased materially in the latter months of the year, and sales effort is now being directed to more populous counties not available to us earlier due to insufficient physician participation. More doctors are joining the plan as participating physicians and lending their aid and influence in extending the plan. Without such support Iowa Medical Service will make little progress. There are now 1,756 participating physicians.

To date our membership has been largely from common employer groups in the larger centers. Such groups generally give a more satisfactory claim experience. Health Improvement Association groups formed largely from Farm Bureau families have been developed in fifteen counties of the state. The experience in these groups has to date been good but the progress in forming and developing these rural groups has been slow and difficult. The rural population of Iowa (including the smaller towns) is approximately 1,166,190, while the urban is 858,451. These figures emphasize the importance and urgent need of enrolling the farm population if Iowa Medical Service is to accomplish the purpose for which you of the profession organized it. This applies to our Blue Cross plans as well.

• An attempt is presently being made to enroll persons, not eligible as members of a group, on an individual basis. This will of necessity consume more time and be a more expensive method of enrolling. This method also gives a greater opportunity for selection against the plan, even though a medical questionnaire is completed, more limited benefits granted, and an additional premium rate charged.

We had an earned premium income of \$593,044.45 during 1948. Payments made to physicians for surgical and medical benefits during the year totalled \$322,604.07. Administration costs were 15.9 per cent

of the earned income. These costs will decrease relatively as they are spread over a larger volume of business.

The volume handled for the veterans' division is down substantially over what it was some months ago.

Figures on a nationwide basis recently released show that there are now 52,000,000 of our population covered for hospitalization under Blue Cross and commercial plans. Similarly some 20,000,000 have surgical benefits and approximately 9,000,000 have medical benefits under some form of voluntary insurance. These figures indicate the extent to which voluntary plans are meeting many of the costs of illness.

Martin I. Olsen, Subchairman

National Legislation

The National legislative program, as far as the medical profession is concerned, received a decided setback in November. Bills affecting the profession have been introduced in such profusion that it is impossible to enumerate them in this brief report.

President Truman's recommendation to the Congress is included in several bills which have been introduced, but none has received serious committee consideration at this time.

This committee is in very close touch with the Washington office, both by telephone and personal contact, and the usual contacts have been made with our congressional delegation.

The trend of medical legislation in the Eighty-First Congress will depend upon the success or failure of the American Medical Association's recently inaugurated national program which, basically, will be an attempt to sell the American public on prepaid medical, surgical and hospital care.

R. D. Bernard, Subchairman

Rural Health

The committee cooperated with the Iowa Council for Better Education in holding the annual Workshop, one of our members being chairman of the section on health. Definite recommendations were made as to methods of meeting various community health needs, and a continuation of the study is contemplated.

During this year a definite contact has been made with the group of women who constitute the Health Committee of the Iowa Farm Bureau. Cooperation with this group on matters of health and medical care should produce more results than have been possible in the past. With them a state rural health conference is being discussed and may be held next year.

In cooperation with the chairman of the Committee on General Practice and representatives of the Iowa Academy of General Practice, a definite beginning has been made, in cooperation with the dean of the College of Medicine of the State University of Iowa, toward a study of possible changes in the course at the Medical College and in graduate training that will not only better prepare men for general practice but will also enable them to visualize the

needs for and the rewards of the general practice of medicine.

It is felt by the committee that until some method is developed to make Blue Cross and Blue Shield available in full benefits to the rural people of the state these organizations are not fulfilling their obligation in a rural state such as Iowa. Financial problems make this very difficult. At present the State Blue Shield of Michigan is embarking on a plan to allow state-wide, individual enrollment, and their experiences should be of value in helping us work out a solution.

The chairman of the committee again attended the National Rural Health Conference and the conference of State Rural Health Committees in Chicago and obtained much needed information and a good deal of encouragement and stimulation. The work of the medical profession, in close cooperation with the farm organizations, is producing a definite change in the thinking of the rural leaders and in their attitude toward the medical profession.

Ernest E. Shaw, Subchairman

Veterans' Affairs

The Veterans' Affairs Committee has renegotiated the fee schedule for Part 1, the fees being about the same as the previous year with slight upward revision in some instances. Part 2 has not been accepted as yet by the Veterans Administration. They are unwilling to accept the one submitted by us, and we feel that the fee schedule offered by them for Part 2 is not acceptable.

There have been a few complaints from the Veterans Administration relative to some excessive requests for treatment, but these seem to have been satisfactorily adjusted. They have also been unable to accept some reports because of insufficient information. There have likewise been some complaints from the doctors participating in the program, which we have endeavored to adjust.

At this time we are submitting another fee schedule for Part 1 and Part 2. We hope to continue No. 1 at the prevailing rates. However, the Veterans Administration is trying to reduce some of the fees which we feel would not be acceptable in view of the fact that physicians' expenses are higher at this time.

Part 2 of the fee schedule will probably be very difficult to negotiate, since there are numerous items in this schedule which differ in the fees submitted and the fees suggested by them. We feel that this will not make too much difference, however, because very little of the work this schedule covers has been done outside of the Veterans Administration hospitals.

We appreciate the assistance and cooperation of our Executive Secretary, Iowa Medical Service, Veterans Administration, and participating physicians, and thank all for past favors. We hope that we will be able to renegotiate a fee schedule acceptable to all participants.

R. C. Gutch, Subchairman
E. M. Honke
J. S. McQuiston

Public Health

This committee has confined its activities for the past year to the nursing problem as it affects the medical profession. The nursing shortage is apparent to every practicing physician. With this in mind this committee has interviewed numerous physicians and has come to the conclusion that the real need is for more bedside nurses.

After due consideration it was our belief that the acute need could best be met by setting up minimum standards for practical nurses. This has been done, and through our Legislative Committee a bill has been introduced in our present Legislature for the licensure of practical nurses.

At a later date we expect to recommend a shortened course of registered nursing for bedside nursing at regular training schools.

H. E. Stroy, Subchairman

General Practice

During the past year the groundwork has been laid for a rather intensive study of the undergraduate and postgraduate training which seems advisable for men doing general practice. Conferences have been held with members of the faculty of the University Hospital, and reports of activities in other states are being collected. It is hoped that this year will begin to bear fruit in the form of statistics on the number of general practitioners required and the training they should have.

C. A. Nicoll, Subchairman

REPORT OF THE MEDICOLEGAL COMMITTEE

During the past year the only important event pertaining to the medical defense features of our Society was the obtaining of a favorable verdict in a troublesome malpractice suit against one of our members.

The importance of the favorable decision by the jury was residual in the fact that it involved the question of placing the responsibility of an error of operating room technic, which resulted in a very definite disability on the part of the patient, upon the operating surgeon rather than upon the hospital employee responsible for the accident.

It has always seemed unfair and illogical to hold a physician responsible for the mistake of a hospital employee. In the hurry and anxiety of a critical operation, a surgeon can hardly smell, taste, or subject to critical examination every fluid, sponge, and suture used in the operation. Although we fully appreciate the efficiency of finespun legal technicalities, it is obvious that if some of them were observed few surgeons would dare to operate on any patient.

Our Society has never proposed to protect any member guilty of actual malpractice, but it would seem that hospitals and individuals under their employment should be held responsible for gross errors of technic over which a physician or operating surgeon has little or no control.

Frank A. Ely, Chairman

REPORT OF THE COMMITTEE ON NECROLOGY

Fifty-one members of the Iowa State Medical Society died during 1948, the oldest being 88 years of age, the youngest 43. Let us stand for a moment in memory of our colleagues while their names are read.

Name	Town	Age
Henry H. Abegg.....	Dougherty	74
William L. Alcorn.....	Washington	68
George Boody.....	Independence	82
Frederick E. Braucht.....	Elkader	80
Walter R. Brock.....	Sheldon	78
Ernest L. W. Brown.....	Iowa Falls.....	73
George B. Brown.....	Clarion	67
Rosabelle A. Butterfield.....	Indianola	87
Charles C. Colleston.....	Spencer	63
Thaddeus C. Cooper.....	Ogden	69
James A. Craig.....	Keosauqua	76
Wendell P. Crane.....	Holstein	43
John R. Crum.....	Stanwood	65
Bruce B. Everall.....	Monona	70
Liberty E. Fellows.....	Newton	55
Eloise M. Foltz.....	Perry	82
Lee B. Furgerson.....	Waterloo	49
Frederick W. Gessner.....	Dysart	68
Bruce L. Gilfillan.....	Keokuk	65
Peter G. Grimm.....	Spirit Lake.....	76
Martin M. Hage.....	Lake Mills	62
Vincent J. Horton.....	Calmar	51
Thomas J. Houlihan.....	Ida Grove	71
Thomas S. Jones.....	Waukee	73
Dwight G. Kreul.....	Davenport	78
Ellis G. Linn.....	Des Moines	85
Robert J. Lynch.....	Des Moines	67
Carl C. Lytle.....	Dubuque	68
Donald McElderry.....	Princeton	74
Bernard A. Michel.....	Dubuque	88
Virgil O. Muench.....	Nichols	63
Harold F. Noble.....	Fort Madison.....	46
Vera V. Norton.....	Waverly	71
John T. Padgham.....	Grinnell	71
Addison C. Page.....	Des Moines	73
Percy L. Parsons.....	Traer	72
Howard Risk.....	Oelwein	67
Walter E. Scott.....	Adel	83
Ferdinand J. Smith.....	Milford	86
Peder Soe.....	Kimballton	86
Homer L. Spaulding.....	Ankeny	84
Robert A. Stewart.....	Independence	69
Troy W. Swallum.....	Spencer	56
Louis A. Thomas.....	Red Oak	86
Frank M. Tombaugh.....	Burlington	79

Erle D. Tompkins.....	Clarion	72
Charles S. Van Ness.....	Peterson	76
Karl Vollmer.....	Davenport	78
Robert M. Wallace.....	Algona	71
Jay H. Wallahan.....	Corning	82
Agnes R. Wilder.....	Atlantic	74

Robert N. Larimer
Secretary of the Council

REPORT OF THE PUBLICATION COMMITTEE

The Journal of the Iowa State Medical Society in 1948 continued its efforts to assist the physicians of the state in keeping informed both professionally and politically.

While the number of original articles and reading pages remained approximately the same, a rise in printing costs and a sharp drop in advertising revenues caused the Journal to lose the profit which it has maintained for two years.

The Cooperative Medical Advertising Bureau, upon whose efforts the financial condition of the Journal depends, is to be commended for its efforts to regain some of this advertising for next year and to replace it with new advertising contracts. Each physician can render the Journal as well as himself a service by patronizing those firms that advertise in the Journal and by mentioning the Journal in correspondence with firms supplying medical products.

As formerly, the March issue carried the program for the Annual Meeting of the Society. The April issue, contributed once again by the State University of Iowa College of Medicine, was the Dean MacEwen Memorial Issue in commemoration of his long and faithful service to the medical profession of Iowa. The transactions of the House of Delegates were presented in the official issue in July.

With the December issue, Miss Viola Turner resigned her position after several years as Assistant Editor. Janet Fowler has taken over the duties.

It is again the wish of members of the committee and office staff to express their appreciation for the cooperation and support of the Iowa medical profession in 1948.

	1946	1947	1948
Reading Pages	548	572	560
Advertising Pages	518	512	440
Percentage of Reading Pages..	51.4%	52.8%	56%
Original Articles	67	77	77
Editorials	56	56	53
Total Journal Expenditure.....	\$18,904.22	\$20,625.68	\$22,598.22
Total Journal Income.....	\$20,380.20	\$20,877.31	\$18,898.91
Net Expenditure for Journal.....	.....	.....	\$ 3,699.41
Net Profit for Journal.....	\$ 1,475.98	\$ 251.63	.....
Number State Society Members.	2,381	2,377	2,424
Net Expenditure per Member..	.....	.....	\$ 1.5261

Everett M. George, Editor

Reports of Special Committees

REPORT OF THE CANCER COMMITTEE

The Cancer Committee has held no meetings, has received no requests, and has had no problems referred to it for recommendations or action during the year. Several matters of unfinished business held over from previous years were continued or completed.

There has been no change in the policy or aims of the Cancer Committee since its reorganization some years ago under the able chairmanship of the late Dr. McNamara. The present policy and aims are: (1) lay education in cancer, (2) undergraduate and postgraduate professional education in cancer, and (3) provision for adequate diagnostic and treatment

facilities for indigents who have or are suspected of having cancer. Some progress has been made in attaining all of these ends.

Lay education in cancer has for the most part been carried out by the Iowa Division of the American Cancer Society under the leadership of Dr. H. W. Morgan and his board of directors and executive committee. The members of the Cancer Committee of the Iowa State Medical Society are automatically members of the Service Committee of the Iowa Division of the American Cancer Society and shape its policies in the matter of lay education. Many of our members also serve on board of directors and executive committee. The Division of Cancer Control of the Iowa State Department of Health also assists materially in this aim.

Professional education in cancer, in the eyes of your Cancer Committee, is the direct responsibility of the Iowa State Medical Society. However, your committee has not been averse to accepting moral and financial support in achieving this aim from the Iowa Division of the American Cancer Society and the Division of Cancer Control of the Iowa State Department of Health. Several activities in the line of postgraduate professional education in cancer have been continued: (1) A subcommittee on revision of the Iowa Cancer Manual, carried over from previous year, completed its task. The revised Iowa Cancer Manual was printed and distributed without charge to each and every practitioner in the state of Iowa. Necessary funds in the amount of \$2,500 were supplied by the Iowa State Medical Society. The manual has been well received throughout the state and has already been reprinted and distributed in several other states. (2) Cancer institutes have been held in several of the larger cities of the state. The funds necessary to bring in good speakers and arrange the dinners were generously supplied by the two agencies aforementioned. The Speakers Bureau of the Iowa State Medical Society recommended the individual speakers. The institutes were in general well received and well attended and served as a means of bringing methods of diagnosis and treatment of cancer to the general practitioner.

Care of the indigent in the matter of cancer has been greatly clarified in recent years, and indigency is no longer a reason for anyone not receiving adequate treatment. Nine tumor clinics are functioning throughout the state. These are operated by local county medical societies under the auspices and financial support of the Division of Cancer Control of the Iowa State Department of Health. Any patient having or suspected of having a tumor, whether indigent or not, may be referred to these clinics for diagnosis and recommendations as to treatment. Any indigent patient may be referred to these clinics for treatment. Funds necessary for hospitalization and treatment of these indigent patients are available through county or state sources. The definition of indigency, especially medical indigency, is very liberally construed by the Iowa courts. Under the present law covering admissions to the University Hospitals, it is mandatory when a patient cannot

be admitted to the University Hospitals within a period of thirty days that the court "shall enter an order directing the board of supervisors of the county to provide adequate treatment at county expense for said patient at home or in a hospital." A number of county officials have learned that they can conserve county funds by referring some of their indigent tumor patients to a nearby tumor clinic for diagnosis and treatment.

The people of Iowa are fortunate because the three agencies attempting to reduce the cancer death rate in the state—The Iowa State Medical Society through its Cancer Committee, the Iowa Division of the American Cancer Society, and the Division of Cancer Control of the Iowa State Department of Health—work together in the most cooperative manner possible. Your committee believes that it should continue its present policy of cooperation with the other agencies, but that it should limit its own work to matters which can be best performed by medical men.

Fred H. Beaumont, Chairman
Arthur W. Erskine, Chairman,
Iowa Cancer Manual

REPORT OF THE FRACTURE COMMITTEE

During the year the committee has been ready and willing to help with any problem presented to it, but none has been presented.

Pertinent material on the care of hand injuries put out by the American Society for Surgery of the Hand was sent to the Editor of the Journal for publication in the Journal, if it was deemed worthwhile. The fracture committee feels that there is considerable room for improvement in the treatment of acute injuries to the hand.

Carroll O. Adams, Chairman

REPORT OF THE HISTORICAL COMMITTEE

In accordance with the action of the House of Delegates on April 21, 1948, the Historical Committee was enlarged to seven members and directed to study and develop as far as possible an appropriate plan for the centenary of the Iowa State Medical Society in 1950. It was further directed to consider the publication of a memorial volume, comprising a complete medical history of Iowa, to commemorate the completion of the first hundred years of the State Medical Society.

The committee has held several conferences and begs to report progress as of this date, February 1, 1949.

A memorial volume has been considered of 500 pages, 6 by 9 inches, to include chapters on the following: Medicine in Iowa before 1850, the State Society with biographic data and photographs of the one hundred presidents, county and district societies, medical schools, hospitals, scientific contributions, and changes in medical practice.

The committee has considered two estimates of expenses and methods of publishing the proposed centennial volume. An estimate has been obtained from a private printing company, based on the publication of a bound volume 6 by 9 inches of 496

pages with 200 illustrations, 5,000 copies, at a cost of \$8,400. With the additional expense of distribution, proofreading and editing, the total expense may range between \$9,000 to \$10,000.

As the result of several conferences with Mr. William J. Peterson, Superintendent, State Historical Society, Iowa City, it is proposed to print this centennial volume as one of the series now being published in connection with the centennial of the State University of Iowa. It would be entitled "The Medical History of Iowa" in commemoration of the centennial of the Iowa State Medical Society, published by the State Historical Society. The editorial supervision, arrangement of historical data and proofreading would be carried out by Mr. Peterson and his staff. All material would have to be in the hands of the printers by September 15, 1949.

The final distribution of the centennial volume will include one copy to each member of the State Historical Society, libraries, and certain educational institutions.

A tentative estimate has been submitted to Mr. Peterson for 6,000 copies with 200 illustrations, in attractive binding, for approximately \$10,000, this expense to be shared equally by the State Historical Society and the State Medical Society.

By the time of the annual meeting of the State Medical Society, a more definite estimate of expense will be available.

The committee regards most favorably the proposal of the Iowa State Historical Society and recommends its consideration by the House of Delegates, and awaits its further direction.

Walter L. Bierring, Chairman, Des Moines
C. L. Jones, Gilmore City
John T. McClintock, Iowa City
L. C. Kern, Waverly
Everett M. George, Des Moines
Clyde A. Henry, Farson
Jeannette Dean-Throckmorton, Secretary,
Des Moines
Clyde A. Boice, Washington (to be approved)

REPORT OF THE COMMITTEE ON MATERNAL AND CHILD HEALTH

no meeting during the past year.

Howard A. Weis, Chairman

REPORT OF THE COMMITTEE ON NATIONAL EMERGENCY MEDICAL SERVICE

This committee furnished General Charles H. Grahl a list of Iowa physicians who were on active duty in World War II who would serve as medical examiners under the Selective Service Act enacted by the Eightieth Congress. The General took over the work of actually setting up the various boards and, while there has been some dissatisfaction expressed in a few counties, the method of examination has worked out satisfactorily.

During June we exerted unusual pressure upon our congressional delegation to block the drafting of physicians. They gave us 100 per cent cooperation. The announcement on February 6 that no more physicians would be drafted was most gratifying.

We have kept in touch with the Council on National

Emergency Medical Service of the American Medical Association, but nothing has been developed at the state level.

R. D. Bernard, Chairman

REPORT OF THE COMMITTEE ON SCIENTIFIC EXHIBITS

First, I want to thank Drs. F. C. Coleman of Des Moines, J. K. Stewart of Clinton, and W. H. Gibbon of Sioux City for their cooperation in performing the services of this committee. These men were instrumental in obtaining exhibits by two national organizations, the American Cancer Society and the National Foundation for Infantile Paralysis. The latter portrayed a demonstration of diagnostic aids. Dr. Coleman, in conjunction with Dr. J. R. Schenken of Omaha, presented another well arranged pathologic demonstration to illustrate that cystic disease of the breast is a potentially dangerous lesion. The teaching staff of Blank Memorial Hospital occupied a booth where it demonstrated the technic of treating severe infections in infancy. Dr. R. D. Woolsey of St. Louis presented a unique exhibit on the subject of trigeminal neuralgia. This committee is serving in the same capacity for the 1949 meeting. However, this year we have been favored by an allocation of twice as much space and are permitting only our own physicians of the state to exhibit. The University Hospital, the State Department of Health, and the local Veterans Hospital staff are offering large exhibits of such high quality that it is anticipated they will be more interesting and instructive than last year. We invite you to inspect them and offer constructive suggestions.

C. C. Jones, Chairman

REPORT OF THE SPEAKERS BUREAU COMMITTEE

The many and varied activities of the Speakers Bureau increased somewhat during 1948. Cancer institutes, postgraduate courses, pediatric and obstetric institutes, and county society and lay meetings were all planned and carried out by this office in addition to the regular schedule of radio work.

The main project of the Speakers Bureau this last year was the cancer institutes which were held in Iowa during the month of October. Seven of these institutes were presented in Cedar Rapids, Sheldon, Davenport, Red Oak, Waterloo, Creston and Washington. These were made possible by the Cancer Division of the State Department of Health and the Iowa Division of the American Cancer Society. A total of 27 lectures was given by prominent specialists from Rochester, Chicago, Omaha, Kansas City, and other cities, and also by members of the State Society.

The total attendance at these institutes was 423 or an average of 60 doctors at each meeting. The programs, which stressed early recognition and diagnosis of cancer, were particularly worthwhile this year, and many favorable comments were made regarding both the institutes and the fine speakers. In summary, it can be said that these are now out

the experimental stages and have proven more than successful; so much so, in fact, that a series of heart and chest institutes set up along the same lines will be presented this spring in cooperation with the Iowa Tuberculosis and Health Association and the newly organized Iowa branch of the American Heart Association.

During the months of March, April and May, postgraduate courses were presented in Burlington and Creston consisting of three and five lectures respectively. In November and December, another course was given in Carroll which also consisted of five lectures. These courses featured discussions by well known men on diabetes, obstetrics, heart and many other pertinent subjects of interest to the general practitioner. These postgraduate courses have all made definite contributions to the advancement of modern medicine in Iowa.

Dr. Clyde A. Boice of Washington, Iowa, has consented to have his name added to the committee, which it is hoped will be approved by the House of Delegates at its next meeting.

Successful pediatric and obstetric institutes, financed by the Committee on Maternal and Child Health and by the State Department of Health, were presented in two centers last year. One was held in March at Fort Dodge and the other in May in Sioux City, and both featured two lectures on pediatrics and two on obstetrics.

The radio work was carried on in much the same vein as previously with the additions of dramatizations of venereal disease cases. A special effort was made to contact the newer members of the society to write the material so that they might be indoctrinated into its activities. Approximately 2,700 copies of radio talks were mailed to listeners in Iowa, Missouri, Illinois, the Dakotas and surrounding mid-western states.

County medical societies availed themselves of Speakers Bureau services twelve times during the past year. The largest project was the summer meeting of the Upper Des Moines Valley Medical Society which presented five lectures on August 12 by prominent Iowa and Minnesota doctors. The Bureau furnished both speakers and movies to the remaining counties.

The Speakers Bureau also furnished speakers and movies nine times to the Parent-Teacher Association, women's clubs, Kiwanis Club and other lay groups.

The committee is happy to present the financial report of the Speakers Bureau for 1948.

ACCOUNT FOR 1948 INCOME

Receipts from Postgraduate Medical Courses	
Webster County	\$ 359.50
Sac County	131.95
Union County	300.32
Des Moines County	161.32
Carroll County	000.00*
Total Speakers Bureau Income.....	\$ 953.09

EXPENDITURES

Salaries	\$1,887.19
Travel Expenses for Speakers.....	11.46
Postgraduate Course Travel Expenses.....	386.57
County Society Services	202.92
Radio	108.69
Stationery, Printing, Telephone, Postage, etc.	375.32

Total Speaker Bureau Expenditures.....	\$2,972.15
Deficit for 1948	\$2,019.06
Funds received from Iowa State Medical Society to Offset Deficit.....	\$2,019.06

*Amount due from Carroll County, \$309.68. When this income is received it will be credited against the 1948 deficit of \$2,019.06 making the actual deficit \$1,709.38

We wish to express our sincere thanks to all of those who so willingly contributed their time and energy to the activities of the Speakers Bureau.

Herman J. Smith, Chairman
Robert N. Larimer
John I. Marker
Horace M. Korn
Tom D. Throckmorton
DeVoe O. Bovenmyer

REPORT OF THE TUBERCULOSIS COMMITTEE

In recent years the Tuberculosis Committee of the Iowa State Medical Society has functioned in a rather inconspicuous way as a sort of liaison advisory group. Year by year we have made a careful study of the work of the Iowa Tuberculosis and Health Association and the work of Dr. Flancher of the Tuberculosis Division of the State Department of Health. We have also had an interest in the work at the State Tuberculosis Sanatorium at Oakdale as well as the Section of Thoracic Surgery of the Department of Surgery at the University of Iowa. Last year the committee made recommendations to the Department of Surgery for enlarging and improving the Department of Thoracic Surgery.

At a meeting of the committee in Des Moines on October 10, 1948, it was decided to broaden the activity of the Tuberculosis Committee and to undertake a more intensive state-wide educational program, not only in the field of tuberculosis but to include all diseases of the lungs as well as the heart and circulation. The newly organized Iowa Heart Association through its President, Dr. Herbert Rathe, was invited to participate in this undertaking. As a result the Tuberculosis Committee of the Iowa State Medical Society and the Iowa Heart Association, with the help and cooperation of the Speakers Bureau of the Iowa State Medical Society, will hold a series of institutes early in the spring of 1949 in Des Moines, Sioux City and Oelwein, respectively. At each of these institutes two speakers will discuss subjects concerning diseases of the lungs, and two will discuss some phase of diseases of the heart and circulation. These institutes will be sponsored by the Iowa Tuberculosis and Health Association and the Tuberculosis Division of the State Department of Health.

A resolution was also adopted asking the program chairman of the medical section of the State Medical

Society for a speaker to appear on the program annually to discuss some type of pulmonary disease. It is the hope of the members of this committee that in this way we can stimulate a wider interest in these fields of clinical medicine.

Ray J. Harrington, Chairman
John C. Parsons
J. Carl Painter
Leon J. Galinsky
R. E. Smiley
Wm. Spear
D. R. Webb

[The secretary read the report of the Committee on Necrology, published on pages 39 to 41 of the Handbook, during which the members of the House of Delegates stood in silent tribute to the memory of the deceased members.]

The Speaker: Next are the reports of the standing committees of the House of Delegates. The first one is Constitution and By-Laws. Dr. Henkin!

Dr. Henkin: The report of our committee consists of two parts, one of which is the holdover from last year. If you will please turn to our report in the Handbook, page 29, there is the matter of changing Article VIII, Section 2:

"The president-elect and vice presidents shall be elected for a term of one year, the secretary and treasurer for three years, and the councilors for three years—the councilors being divided into classes so that four will be elected each year except in every third year when only three shall be elected. No councilor shall serve for more than three successive terms"—which, of course, is the main change proposed.

This amendment was proposed last year and will have to be voted upon this year. Then, in addition, there has been a number of changes proposed by various members, some of which are merely correction of errors that have existed for some time. The committee has reviewed these and brings in the following report:

Amend Article VII, Section 2, to read as follows: "The place for holding each annual session shall be fixed by the House of Delegates, but authority for setting the time of the meeting may be delegated to the Committee on Arrangements."

It has been found, as a practical matter, that the date of the meeting has to be arranged in accord with available time at the hotels, and it is governed by conditions outside the control of the House of Delegates.

Amend Article VIII, Section 1, to read as follows: "The officers of this Society shall be a president, two vice presidents, a president-elect, a secretary, a treasurer, a speaker and a vice speaker, eleven councilors and three trustees."

Amend Article VIII, Section 2, to read as follows: "The president-elect, vice president, speaker and vice speaker shall be elected for a term of one year . . ."

These amendments relative to the Constitution are presented for reading this year but cannot be voted upon, of course, until next year.

Then amend Chapter II, Section 1, of the By-Laws to correspond to changes being suggested for the Constitution: "The Society shall hold an annual session at such time as has been arranged by the Committee on Arrangements and place as has been fixed at the preceding annual session by the House of Delegates." That is merely a confirmation of the other amendment.

Amend Chapter IV, Section 6, of the By-Laws to read as follows: "It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body in such a manner that one-half the number, as near as may be, shall be elected each year. The term of office of these delegates and alternates shall start January 1 following their election." The old wording called for electing a delegate and a half, each year.

Amend Chapter VI, Section 5, of the By-Laws, by inserting the following sentence after the first sentence in the second paragraph: "Any proposal to appropriate funds other than for the usual running expenses of the Society and Journal shall be presented in a separate resolution."

This was thought necessary to prevent a good many proposals being made and carried without knowledge of how much the cost was going to be. I guess the financial report this year shows the necessity of budgeting a little more closely.

Amend Chapter VI, Section 5, third paragraph, by adding the following phrase: "Except that should a vacancy occur in the office of president-elect by reason of death or total incapacity of the incumbent, or for any other reason, the House of Delegates shall be called into session within fifteen days to name a president-elect." Your committee begs to ask discussion by the House on this point. It suggests that, instead of calling the House of Delegates, the Executive Council might be authorized to fill the vacancy.

It seems as though, with the Executive Council perhaps running the Society for a full year, it should be able to take care of that exigency, which we hope will never occur.

If the House of Delegates decides to elect a speaker and a vice speaker, then Chapter VI, Section 6, should be deleted.

In view of the fact that the Constitution specifies fourteen members of the Executive Council shall constitute a quorum, and in view of the fact that it has been impossible to get a quorum for the last several meetings of the Executive Council, your committee asks whether the House of Delegates would like to have the figure changed from fourteen to thirteen. We have been informed that on many occasions thirteen members have been present but not fourteen. We have no direct proposal to make on that. Some of our committee members suggested that better attendance on the part of some the councilors would answer that question, but maybe, with the limited time of doctors, better attendance is not possible. Maybe it

should be reduced to thirteen; if they are superstitious, maybe twelve. For a number of meetings, instead of passing on a problem or suggestion or subject, all they could do was simply say, "It is the opinion of this group present that so-and-so should be done," because, actually, they could not pass on it.

I presume these will have to be handled separately.

Leaving out the amendments to the Constitution, I move that the Society adopt the amendments to the By-Laws that have been suggested in this report.

The Speaker: Do I hear a second?

[*The motion was regularly seconded.*]

The Speaker: Is there any discussion? All those in favor say "aye"; contrary "no." *The motion is carried.*

There is to be discussion on the amendment to Chapter VI, Section 5. Read that again.

Dr. Henkin: Recommending the phrase, "Except that should a vacancy occur in the office of president-elect by reason of death or total incapacity of the incumbent, or for any other reason, the House of Delegates shall be called into session within fifteen days to name a president-elect."

Your committee begs to ask discussion by the House on this point. The committee suggests that instead of calling the House of Delegates the Executive Council might be authorized to fill the vacancy under that circumstance.

Dr. Sternberg: In case of the incapacity or death of the president, the first vice president succeeds him. There is no provision at the present time for providing for a successor to the president-elect except through the Board of Trustees. They now have the authority to name a president-elect if the president-elect should become incapacitated.

This suggestion came from us members of the Board of Trustees, because we feel we should not be shouldered with that responsibility. Why should three men choose a president-elect for the Iowa State Medical Society?

Our thought was that we should call together the House of Delegates, because it is the House of Delegates which should elect the president-elect. I do not think even the Executive Council is a large enough group, and representative enough of the State Society, to voice its wishes with regard to the person who should be president of this Society. When you come down to facts and figures, whoever is elected will succeed to the presidency. The House of Delegates should be called together in the case of such an emergency, because it will only take a short time. Then the State Society has elected a president-elect who will succeed as president, and that is the way it should be done.

The Speaker: Being the guinea pig that sort of started this thing, as I see it, there is a choice of putting the responsibility upon the House of Delegates or, as the committee recommends, in lieu of that, upon the Executive Council. Do I hear a motion for one or the other? There is no motion before the House.

Dr. Goenne: May I ask for a clarification? In the Handbook, on page 72, under Section 5, Trustees, I do not know what this means: "Should a vacancy occur, on account of death or otherwise, among the general officers, delegates to the American Medical Association, standing or special committees of the Society, the Board of Trustees may fill such vacancy until the next Annual Session of the House, unless otherwise provided for in this Constitution and By-Laws."

It seems to me, Mr. Speaker, that that paragraph clarifies the subject before the House at the present time.

The Speaker: Dr. Boice, do you want to speak on this?

Dr. Boice: My personal opinion is that the House of Delegates should be called together to name a president-elect in case a contingency should arise.

The Speaker: Is that in the form of a motion?

Dr. Boice: I thought you had that motion.

Dr. Sternberg: I so move.

Dr. Boice: I second that.

The Speaker: Is there further discussion? If not, all those in favor say "aye"; contrary "no." *It is carried.*

Dr. Henkin: The committee would like to know what this group thinks about the advisability of changing the quorum of the Executive Council from fourteen to thirteen, so that the Executive Council could meet and transact business.

The Speaker: What do you recommend?

Dr. Henkin: It seems that one of two things has to be done, either the quorum has to be reduced, or the attendance has to be increased.

The Speaker: Do you recommend that the quorum be reduced to thirteen?

Dr. Henkin: I think that would be the most certain way of solving the problem, because it seems that thirteen are attending.

Member: What is the total number?

Dr. Henkin: Eighteen. It seems to me that thirteen would be a reasonable quorum.

Dr. Howell: I suggest we have alternate councilors the same as we have alternate delegates. In that way we will have a quorum. If the delegate could not come, the alternate could come.

The Speaker: Do I hear a motion as to whether this should be thirteen, twelve, or what?

Dr. McCarthy: I move it be limited to twelve. [*The motion was seconded.*]

The Speaker: It has been moved that the quorum be made twelve.

Dr. Boice: When the Executive Council was established, a quorum of fourteen was set for a definite purpose, so that it would take a good representation of the State Society to transact business. It was not felt that twelve or thirteen members of the Society should transact business which would bind the Society, and that the Society should be represented by men from all over the state.

President Reeder, a few minutes ago, suggested that the three delegates to the American Medical Association be made members of the Executive Council and members of the House of Delegates. I myself think that the delegates to the American Medical Association should be members of this House of Delegates by virtue of their office, and they should also be members of the Executive Council. If such a suggestion is adopted, you do not want to change that one.

The Speaker: If there is no further discussion, we will vote on the motion.

Dr. Maxwell: I rise to a point of order. A change in the Constitution has to lay over until next year, and a change in the By-Laws has to lay over until the next session.

The Speaker: You are correct. The motion then should be to accept this and lay it over for the next meeting. If that is the motion, I will put it again. The recommendation is for the quorum to be twelve, and the motion is to lay that over until the next meeting. All those in favor say "aye"; contrary "no." *The motion is lost.*

Dr. Shaw: I would like to ask a question of information first: exactly where is that quorum? It is in here, but I cannot find it.

Executive Secretary McCord: It is on page 61.

Dr. Shaw: It is in the Constitution?

Executive Secretary McCord: Yes.

Dr. Shaw: It must of necessity lay over until next year. We have no choice.

The Speaker: As I understand it, what we are making here is a choice between a quorum of fourteen and twelve. The committee did not state definitely which one it recommended. To me, it is up to the House of Delegates to say whether it remains fourteen or is reduced to twelve.

The motion to adopt the recommendation of the committee to make it twelve has been lost. Therefore, you are back to fourteen.

Dr. Rohlf: I *move* we accept the suggestion of Dr. Boice by adding the three delegates to the American Medical Association to the Executive Council and leaving the quorum as it is.

Dr. Henkin: I believe that would solve it. I *second* the motion. The chances are that at least one of those three would be present, which would make a quorum.

The Speaker: As I understand it, it has been moved and seconded that the Executive Council be enlarged to include the three delegates to the American Medical Association, but the amendment cannot be voted on until next year. The motion is for approval of the recommendation.

[*The motion for approval was put to a vote and carried.*]

The Secretary: The next report is that of the Legislative Committee, which Dr. Billingsley is going to give.

REPORT OF THE LEGISLATIVE COMMITTEE

Your Legislative Committee concerns itself primarily with matters dealing with the medical pro-

fession and public health and has not taken a part in general legislative matters such as taxes, roads, etc., and this report deals solely with those subjects.

The Nurses Bill. The nurses bill providing for the classification of a registered nurse, of a licensed practical nurse and the practical nurse who is unlicensed passed both the Senate and the House and will become law. This bill was amended some and does not have as strict requirements as originally contemplated, but is the first step toward bringing the practical nurse under a license and examination qualification, and is a good step for the future when these requirements can be improved in the interests of public health.

Optometry Bill. This bill is in the sifting committee after having been once reported out by the Senate sifting committee. The calendar, however, was dumped, and this bill went back into the sifting committee, and it is doubtful if action will be taken on this bill in either the House sifting committee or Senate sifting committee.

House Joint Resolution 6; Public Health Committee of the Senate. This bill providing for an interim committee to study all of the health laws of Iowa passed the Senate but was killed in the House, and one of the primary factors was the fact that the House and Senate did pass what is called a "Little Hoover Commission Bill" to study all of the state departments. Your Legislative Committee, however, was of the opinion that public health, because of its importance, should have a separate study committee and can report that it did present to the legislature and work for a bill to study and solve public health problems of Iowa, and the responsibility is solely back on the House of Representatives for the action they took.

Senate File 464; Bierring's Bill. This bill would give permissive authority for setting up county boards of health by public election and centralizing administration and enforcement of public health regulations on a county basis. It would permit a county-wide board to employ a full time health officer, a physician especially trained in public health, and other staff who meet the educational requirements prescribed by the State Board of Health. The bill would also permit multicounty health departments for the benefit of rural counties where overhead would be too high. This bill is still in the Senate sifting committee, and it is doubtful if action will be taken; but again the legislature was presented with a bill to improve public health in Iowa.

Pure Drug and Cosmetic Act. This bill passed the Senate 46 to 0 and is in the House sifting committee; in its first test in the sifting committee it only lacked one vote of getting out. There is a possibility that this bill may pass. It is a replica of the Federal Pure Food, Drug and Cosmetic Act except that food is omitted from the bill, and it deals with proper labeling, truthful advertising, adulteration, and dangerous habit-forming drugs, limiting the dangerous habit-forming drugs to doctor's written prescriptions, and, if the doctor dispenses such a drug, he must do it personally and keep a record of it.

Workmen's Compensation; Doctor and Hospital Compensation. Your Legislative Committee cooperated with the hospitals in the passage of a bill increasing the statutory allowance of \$800 for both hospital and doctor bills where a workman is injured in his employment. The \$800 had to be split between the doctor and the hospital. The new law allows the doctor up to \$500 and the hospital up to \$1,000.

Basic Science Bill. This was the bill that was sponsored by the chiropractors to repeal the Basic Science Law, and, when it met opposition in the House, they amended it to allow each professional board to give its own basic science examination; that is, the chiropractic board would give the basic science examination to those desiring to become chiropractors; the osteopathic board would give those desiring to become osteopaths their basic science examination, etc. This bill as amended passed the House. A tremendous effort has been made by the chiropractors to get this bill out of the Senate sifting committee, with six or seven people working constantly as lobbyists in the Senate, and so far their efforts to get this bill out of the Senate sifting committee have been defeated.

While it is purely hearsay, we have been informed that the chiropractors are going to hire a party to travel the state for the next two years, commencing after the adjournment of the legislature.

The chiropractors have also stated that they are going to get their results during the next two years. One of their five or six lobbyists that they used contacted a very competent man on legislative affairs and wanted to retain him to advise them for the next two years on their legislative procedures. He turned them down, although they told him they were willing to pay him well for his counseling services.

* * * *

Your Legislative Committee wants to thank all of those who have helped in this session of the legislature and for your fine work at home with your legislators, as that is the most important part of the work of the Legislative Committee.

However, as we look at the future, we are going to have to increase our efforts tremendously in all phases of our organization's work, for truly we are living in a world of organized minorities.

All of you are familiar with our terrific tax load, with the trend of the times, and, as some have said, with "creeping socialism" through actual laws, as in England.

It presents a tremendous challenge to our profession and to all professional and business men, particularly those who believe in free enterprise and individual initiative and ambition.

We, as doctors, will have to take decidedly more interest than we have in the past in our government and seriously consider having more doctors in the legislature, particularly in the House of Representatives in Iowa. Our profession is indebted to

Drs. Edward S. Parker, of Ida Grove, and F. M. Roberts, of Knoxville, for their fine services as state senators and should congratulate them for the part they are taking in our government. We need more to follow their fine example.

It also invites serious consideration of your joining with other professional and businessmen in your town to closely scrutinize and get men to run for public office. I cannot emphasize this to you too strongly.

Legislative Committee
John W. Billingsley, M. D., Chairman

Dr. Billingsley: Most of you know that about midway in the session of the legislature this year, Mr. George C. Kern, who for many years has been the attorney for your Legislative Committee, died suddenly of a heart attack. We were very fortunate in persuading Mr. I. W. Myers to take over.

I have asked Barney Myers to be here tonight, and I would like to have him stand up and say "hello" to you. I would like you to see him, so you will know who he is.

The Speaker: The next supplementary report is that on Medical Education and Hospitals, Dr. George H. Scanlon.

Dr. Scanlon: Mr. President, members of the House of Delegates, friends, and, I suppose, enemies—we have a few of those; they keep life interesting for us.

REPORT OF COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

This is the third annual report of our Committee on Medical Education and Hospitals to the Iowa State Medical Society. As you know, this committee is composed of Dr. J. V. Treynor, Council Bluffs, Dr. R. F. Birge, Des Moines, and myself. The responsibility of this committee has grown greater each year because of the trend of the times and because of the added responsibility being thrust upon us by outside forces. For the purpose of clarity in presentation, I wish to divide this report into the following categories:

1. A resume of the Medical School under its new system.
2. Responsibility of the Medical School and the State Medical Society.
3. Suggestions to the legislature.

A Resume of the Medical School Under Its New System. The committee met with President Hancher, Dr. Mayo Soley, dean of the Medical College, and Dean Jacobsen on March 17, 1949. Our discussion was very frank, and it covered many phases of our profession and the problems relating to it.

Two years ago we pictured the system which was then introduced, and at that time we called it a form of socialized medicine. At this meeting on March 17 the president was asked if he was satisfied with the proceedings of the past two years under the new plan. He answered this question in the affirmative but added that a committee composed

of faculty men was now studying the program and would present suggested changes. All in all, the committee members expressed satisfaction with the present program. When asked if he would care to name this system of practice, the president answered that he did not choose to; however, he stated, "Call it anything you wish as long as it works."

You will recall that one important point brought forth in behalf of the present adopted plan was to de-emphasize private practice. You will be interested in knowing the income received by the University Hospitals from private practice for the year beginning July 1, 1947, and ending July 1, 1948. It is as follows:

DEPARTMENT	Total Income	Operating Expenditures	Commutation Fraction	Total Expenditures	Balance T'fd To Trust Funds
Gynecology and Obstetrics	\$ 41,375.40	\$ 7,000.00	\$ 28,200.00	\$ 35,200.11	\$ 6,175.29
Neurology	28,338.75	3,363.63	11,500.00	14,863.63	13,475.12
Ophthalmology	72,772.39	5,427.09	36,125.00	41,552.09	31,220.30
Pathology	14,545.39	826.03	7,625.00	8,451.03	6,094.36
Pediatrics	24,474.70	6,257.66	18,217.04	24,474.70	
Radiology	43,830.53	4,126.11	20,500.00	24,526.11	19,204.42
Surgery	64,710.80	7,209.25	21,682.08	28,891.32	35,819.48
Internal Medicine	43,794.20	4,525.94	25,625.00	30,150.94	13,643.26
Bacteriology	1,763.53	34.57	1,728.96	1,763.53	
Orthopedic Surgery	55,296.76	12,757.75	20,250.00	33,007.75	22,289.01
Dermatology and Syphilology	17,354.69	3,314.17	14,040.52	17,354.69	
Otolaryngology	67,605.37	11,998.99	21,000.00	32,998.99	34,606.38
Urology	83,161.48	11,189.71	27,000.00	38,189.71	44,971.77
Totals	\$559,023.99	\$ 78,051.00	\$253,493.60	\$331,524.60	\$227,499.39

DEPARTMENTAL TRUST FUNDS

	Trans. from Med. Serv. Fund 7-1-47	Expenditures and Encumbrances	Bal. T'fd to Cent. Sci. F'd 7-30-48	Overdraft C'r'd Fr'd. Against 48-49 Funds
Gynecology and Obstetrics	\$ 19,586.72	\$ 21,731.07	\$	\$ 2,144.35 def.
Neurology	13,948.48	4,746.01	9,202.47	
Ophthalmology	29,104.73	27,943.91	1,160.82	
Pathology	5,277.94	4,955.84	322.10	
Pediatrics				
Radiology	25,106.61	13,585.29	11,521.32	
Surgery	30,272.86	18,874.54	11,398.32	
Internal Medicine	16,525.21	6,724.32	9,800.89	
Bacteriology				
Orthopedic Surgery	2,753.64	2,375.49	378.15	
Dermatology and Syphilology				
Otolaryngology				
Urology				
Totals	\$142,576.19	\$100,936.47	\$ 43,784.07	\$ 2,144.35 def.

Does the Society feel that the figures just presented fulfill this plan? One hesitates to predict to what heights such private practice might go if the State Society does not insist that the Board of Education and the Medical College live up to its original agreement to limit its private practice to 5 per cent of the total bed space in use.

Responsibility of the Medical School and the State Medical Society. You have undoubtedly been reading the numerous articles in our various papers, periodicals, and magazines regarding the medical problems of today, and many of you are wondering if our Medical School is fully aware of its responsibility, and if it is taking the necessary steps to correct these

problems. We would like to assure the Society that Dean Soley is fully aware of the tremendous task which confronts him. For instance:

(1.) Much criticism has been leveled at the manner of selecting the students for admittance. This is a tremendous task, and particularly when you have approximately 250 applicants from which to choose 90. The officials of the University are interviewing each applicant individually, taking into consideration his grade point average, his aptitude tests, his personality, and the other various qualifications that enter into the question of his fitness for a future in medicine. Gentlemen, this is a hard and tedious task, but I know they are doing the best that is

humanly possible. If they err, it will not be because of a lack of concentrated effort on their part.

(2.) The problem of general practitioners—this has been discussed or will be, but we assure you the dean has given this much study and consideration, and we are sure a splendid program for general practitioners will eventually be worked out.

At this point in the report it might be well to consider the possibility of changing the requirements for specialization to include one or two years of general practice. This would be an asset to any specialist.

(3.) A department for the training of technicians for pathology and bacteriology is being formulated,

but the necessary appropriations for such a program will have to be arranged.

It is not difficult to see the necessity for a close and full cooperation between the State Society and our Medical School, and this cooperation must be mutual. The State Society must assume the leadership in educating the public on its responsibility to its doctor. Many young doctors have gone to the small towns, willing to locate there, only to find no home available for their family, no office space for a location, and no one interested enough to give them the necessary financial aid to get started. The community must also realize that its doctor is a competent and well educated man. The people must go to him with all their problems, not just run to him for minor illnesses and then go elsewhere with major problems. Their doctor will know when he needs consultation and will not hesitate to ask for it.

It might be well for the State Society to consider the appointment of a committee to investigate the high cost of drugs and dressings charged by hospitals. An investigation of the other hospital problems of interest to the Society also would be worthwhile. It would be well for the public to realize that the doctor's charge is only a small part of the problem of medical expense.

Suggestions to the Legislature. If our government's and Mr. Ewing's contentions are correct, that we are short of doctors, then our universities must assume some of the responsibility for not admitting larger classes—why not graduate 90 instead of admitting 90? They tell us that appropriations and facilities are not adequate; then the answer is for our legislative bodies to appropriate sufficient funds to expand the facilities for the purpose of medical education, and to see that the money thus appropriated is used for that specific purpose. It is time for the people to realize the medical profession is being made a political football, and the cause of these ills is not the doctor but the people who regulate his training and appropriate the money for that purpose. We resent men elected or appointed to political position who call our profession a "closed shop." The public needs to know that the American Medical Association has no control over our lives or any of the other 142,000 doctors. We are not governed or dictated to as so many politicians would lead the public to believe.

It is remarkable to note that many leading legislators in our state discuss our need for doctors and the rural need for better medical care, but these same men fall under the old adage, "They can't see the forest for the trees." They call upon our Medical School to increase the enrollment and at the same time forget the cost involved. They insist that the superintendent and our dean serve them a dollar meal, and a good one with all the trimmings, but allow them just \$.65 to do this. After all, gentlemen—let's ask the legislators and the public to be fair. If they are, then I am sure our profession will do its part.

Probably the most important suggestion we have to offer is the appointment of a Doctor of Medicine to the Board of Education. It is one which, if carried out, would be the connecting link between our state government and our Medical School, between our government and the medical profession of the state, and between the State Society and the Medical School. Our profession then would be represented on the Board; the governor and the legislative body would have a man they could turn to for consultation and for proper evaluation of the appropriations asked for by the Medical School; and, more important, the taxpayer will feel he has someone who is in a position to see that his money is being spent to the best advantage.

Committee on Medical Education and Hospitals
George H. Scanlon, M.D., Chairman

Dr. Scanlon: I would like to ask the House of Delegates to recommend this paper for adoption. I would like to speak informally for a moment. First of all, the medical profession is in a tough spot, as we all know, but the thing that has gripped my soul no end is that they try to blame the whole thing upon my profession. First of all, let us admit that we are somewhat to blame. Let us not try to run around in a white coat all the time. We have failed in some respects, but our failures are due to the fact that sickness takes up too much of our time. I do not think from now on that is going to be a logical excuse. We have failed to educate the public; we have failed our legislative body. In so doing, we have made it tough for our Medical School, and we have made it tougher for ourselves.

Secondly, the public must realize that that is only a minor part, in my judgment, of the fault. The medical schools, not just in Iowa but everywhere in the United States, govern the requirements for medical students. They govern the requirements of admission and rightly so. But they also make out the requirements for men who are going to specialize. Dr. Charles G. Rowan once said to me and to a group of doctors that no man should be allowed to enter a field of specialization until he had had at least two or three years in general practice. I agree; I think general practice is the only field where his education is well rounded. Without it he has lost something that money and hospitals cannot buy for him.

Third, change the requirements and improve them.

Last, there is no valid excuse for the legislative body to lay down on the job. It owes those appropriations. I feel they are an intelligent enough group of people that, if facts are presented to them, and if they are acquainted with the essentials for medical education, they will not go home without making proper appropriations for the University.

In closing, I would like to ask you to accept my report, and I hope Dr. Alcock doesn't have me back here next year.

[A motion for acceptance of the report of the

Committee on Medical Education and Hospitals *was made, seconded, and carried.*]

The Speaker: Another supplementary report is in relation to the report on Cancer. Dr. Erskine!

REPORT OF THE COMMITTEE ON REVISION OF THE IOWA CANCER MANUAL

The first edition of the *Iowa Cancer Manual* was prepared in 1937 by the Executive Cancer Committee of the Iowa State Medical Society under the chairmanship of the late Dr. F. P. McNamara. The Society advanced \$518.17 to help defray the expense of printing the manual and distributing it to the members of the Society and the senior medical students. Contrary to a report circulated among you a year ago, the records of the Society show that this money was repaid in two payments, one in 1939 of \$79.17, and the other in 1940 of \$439.00. Repayment was possible because more than 50,000 copies of the manual were reprinted and sold to other states at a profit. Consequently, the first edition of the manual cost your Society nothing.

The second edition of the *Iowa Cancer Manual*, prepared by our committee, has been distributed to all Iowa physicians, osteopaths, residents and interns, and to the senior medical students. The total expense of printing and distribution was \$3,927.54, which was met by a gift of \$500.00 from the Division of Cancer Control of the State Department of Health, a gift of \$700.00 from the Iowa Division of the American Cancer Society, and an appropriation of \$2,500.00 from the Iowa State Society, and a loan of \$227.54 from our committee. The manual has had a good reception. You will be pleased to learn that more than 5,000 copies have already been reprinted and sold to North Carolina, the Philadelphia Division of the American Cancer Society, Nebraska, Illinois, Missouri, New Jersey and Tennessee. Several other states are now negotiating for manuals. Many single copies have been sold throughout the United States, in Europe, and in South America. Profit from all sales prior to April 1, 1949, was \$492.54. This profit has been used to retire the loan by our committee and to reimburse it for \$15.63 expended during the past year. The remainder, \$249.37, is now credited to the account of the Iowa State Medical Society.

Committee on Revision of the Iowa Cancer Manual
A. W. Erskine, Chairman

The Speaker: Do you recommend it for adoption?
Dr. Erskine: I *move* its acceptance.

[*The motion was regularly seconded, put to a vote and carried.*]

The Speaker: Are there any other supplementary reports?

Dr. R. D. Bernard: I think perhaps the delegates would be interested in last minute news from Washington. My report in the Handbook was very sketchy in that no legislation had been presented up to that time. Since that date, some eight or ten very important bills concerning socializing the practice of medicine have been introduced.

The Wagner Bill, Senate File 5, is a reproduction of the one introduced in the last legislature. There

are now bills presented to both Houses of Congress which would eliminate us and practically all the other professions if they are adopted. The latest bill to go in is the Taft Bill. The Taft Bill is an omnibus bill which is a reproduction or rewriting of S545 of the last session, which bill had the blessing of the American Medical Association.

The Taft Bill—and I want to make this plain—is not the American Medical Association bill or the present 81 Bill. It is an omnibus bill which will include all of the good points of the various bills which have been introduced. It is the opinion of Joe Lawrence that some parts of the Taft Bill will not be accepted. On the other hand, the vast majority of its provisions will be accepted by the American Medical Association.

The Truman Bill which is in the offing will be another omnibus bill which will throw Senate File 5 in the ashcan. It will include all of the various things which have been brought up in the other bills.

If I can answer any questions after this is over, I will be glad to do so.

One other point—you have not reached the report of the Committee on National Emergency Medical Service, which is very sketchy. I think it is well worth bringing up here tonight that nothing has been done on this during the past year. The council, headed by Dr. Sargent, of Milwaukee, an exceptionally brilliant fellow, met two weeks ago. As you know, earlier we sent letters to all men eligible to be drawn into the army. That procedure was eliminated about a month and one half ago.

Two weeks ago this council met with representatives from practically every state. It is outlining a plan to bring back into the army the younger men who have been working part-time in hospitals, part-time in country practices where they have been established. This committee will probably have plenty of contact with you older men next year in trying to solve the problem of removing interns and residents from hospitals and placing them in the army.

I call your attention to this because you are going to hear about it—you are going to receive literature on it. We are all interested in these young boys and want to give them a break. They have gone out into general practice and are establishing themselves at a sacrifice, and yet they still have not paid their obligation to the government. The government needs men more than you realize.

The Speaker: I am told that I have to ask if there are any supplementary reports from the following: Delegates to the American Medical Association? [None] Councilors?

Dr. Boice: No supplementary report.

The Speaker: Finance? [None] Medicolegal? [None] Medical Service and Public Relations? [None] Baldrige-Beye Memorial?

Dr. Goenne: The report of Dr. Agnew, who is chairman of that committee, is that no senior student at the State University has prepared a paper

for submission to the committee. Therefore, no award was made.

The Speaker: Thank you. Fracture? [None] Historical? Dr. Bierring has something.

Dr. Walter L. Bierring: Mr. Speaker, members of the House of Delegates, The Historical Committee would like to make a supplementary report. After this House directed the committee at the last session to study and consider a proper method of commemorating the centennial of the Iowa State Medical Society, it was enthusiastically decided that this should be in the form of a single volume of the history of medicine in Iowa, as a proper commemoration of the hundredth year of the organization of the State Medical Society.

Efforts were made at once to divide the subject into several chapters. We were very much encouraged last fall by a conference with the State Historical Society. Mr. William J. Peterson, the superintendent, told us they would like to cooperate in this and consider it as another one of the centennial volumes being issued in connection with the centennial of the State University. We received a great deal of valuable advice and counsel from Mr. Peterson. As late as the last meeting with him, on March 23, he was still very enthusiastic and felt that it could be made a combined project in which the expense would be shared equally, not to exceed \$10,000 for the entire edition. The Society would receive 3,000 copies, which would permit the issuance of a copy to each member without charge and about 300 copies for distribution to libraries and other state societies.

A week later the curators of the Historical Society met. Although there were only eight curators present out of eighteen, they very abruptly disapproved the whole project and claimed that it would be of no particular interest, and they felt that the history of agriculture and livestock should have preference over the history of medicine in Iowa.

We are confident, since the responsibility is now placed upon the committee, that we can develop a volume that will trace the evolution of the Iowa doctor from the pioneer days to the present, the remarkable advancement that has been made in medicine, particularly in medical education, in the development of medical schools, of which there have been twelve schools and five that were mostly on paper. We will have a story of journalism in Iowa, comprising some twenty-three journals. We will endeavor to make this a continuous story of interest in which there will be a distinct continuity. It will be more of a story of the romance of the doctor in Iowa rather than a dry compilation of historical data.

While our first thought was a bound volume of about 500 pages, we feel that we could reduce it to about 400 pages, nicely bound. We feel that we can issue 3,000 copies for approximately \$6,000 or \$6,500.

We feel that to present this in one volume would not only have historical interest but would com-

memorate the story of medicine in Iowa. It will be of value to other societies. It will have distinct library value.

Therefore, the committee unanimously recommended to the Board of Trustees that a single volume be published of the history of medicine in commemoration of our centennial which occurs next year.

The Speaker: That is a matter for the trustees, of course.

The next will be Industrial Health. Any supplementary report? [None] Maternal and Child Health? [None] Scientific Exhibits? [None] Tuberculosis? [None] Election of Life Members? Dr. Phillips!

The Secretary: Mr. Speaker and members, the following applications for life membership because of 50 years' practice and 30 years' membership have been received:

Herbert R. Sugg, Clinton
Charles D. Shelton, Bloomfield
John R. Gardner, Lisbon
Pearl L. Marble, Liscomb
Claude B. Rogers, Earlville
George W. Franklin, Jefferson
David H. King, Batavia
Walter N. Wright, Rose Hill
John M. Griffin, Des Moines
Oliver S. Barber, Creston

The following applications for life membership because of disability have been received:

Robert H. Lott, Carroll
Sidney D. Martin, Carroll
Otis P. Morganthaler, Templeton
Joseph E. Ridenour, Waterloo
Merritt N. Gernsey, Waverly
Francis L. Love, Iowa City
Edward M. Williams, Oskaloosa
Walter E. Baker, Des Moines
Carl H. Carryer, Des Moines
Wallace A. Dunlap, Des Moines
Milton B. Galloway, Webster City
Lafe H. Fritz, Dubuque

The Secretary: I move that these names be accepted.

[*The motion was seconded, put to a vote and carried.*]

The Speaker: The next is our recommendation for a place on the Board of Medical Examiners. The governor makes the appointment, but he usually accepts our recommendation. Dr. A. D. Woods, of State Center, is retiring; that is, his term is up. Do I hear a motion to reappoint him?

[*Upon motion regularly made and seconded, it was voted that Dr. Woods be nominated for reappointment on the Board of Medical Examiners.*]

The Speaker: Memorials and communications? [None] New business?

Dr. Luse: I was authorized to bring before the delegates the matter of having a home for doctors, doctors' wives and doctors' widows. I sent a letter to each county society asking if it would send me

the number of people interested—doctors, doctors' wives, doctor's widows—if they were interested, and whether they approved of the idea. I received 53 replies. The total number of doctors was given as 106, interested; doctors and their wives, 143; doctors' widows, 15. But the following counties, Boone, Emmet, Hardin, Worth and Wright, I believe, sent in the whole number of their membership. I added them, which made 74 doctors and 109 doctors and wives, and subtracted them from the total above. That left 32 doctors interested in a home, 34 doctors and their wives, and 15 doctors' widows. There were 38 out of the 53 that said they were in favor of it and 6 said "no." One was neutral; three, "possibly"; and one was interested.

The letter I sent out was about a doctors' home, not a convalescent home or hospital, but some place where they might go if they wanted a place to live, such as an apartment hotel. It would be in a large town, and they could come and go as in their own home.

I wrote to New York where I understand they had a plan, and the reply I got was this: they had a home at one time but had given it up, and their fund for the home was paid out to the doctor individually, so that he could live where he wished.

It was brought up tonight that we have one man in the state who is in need of assistance, and the county society has no funds for that purpose. We have some money, although we went in the red last year. My idea was to bring the matter up for discussion. We might allocate a certain sum from the Society and each year apply \$1 or so from each doctor's membership dues to that fund. We might also appoint a committee to study the matter and report next year as to what it thought was best, a home or a fund with which we could supply a doctor with what he needed.

The Speaker: Is there any discussion of this presentation? I suggest it be referred to the Board of Trustees. May I hear a motion to that effect?

[*A motion was moved, seconded and carried to refer the matter to the Board of Trustees.*]

The Speaker: Any other new business?

Dr. Jenks: Dr. Alcock, is this the time to put in resolutions?

The Speaker: Yes.

Dr. Jenks. This resolution has been suggested by the Polk County Medical Society. It is a resolution on a fee schedule for industrial compensation cases:

"Whereas, There is no fee schedule in existence in the state of Iowa for the care of industrial compensation cases; and

"Whereas, Certain agreements pertaining to the fees allowed have long since been outmoded; and

"Whereas, Fees now paid in some cases are not in keeping with those charged in private practice; and

"Whereas, The Industrial Commission is extremely anxious to have some sort of a minimum fee schedule established, because it is in almost daily

difficulty at the present time, both with the doctors and with the insurance carriers, over the somewhat arbitrary payment it is forced to allow; and

"Whereas, The insurance carriers are extremely anxious to have some type of a fee schedule set up for compensation cases; and

"Whereas, Iowa is one of the few states in which actual minimum charges for compensation cases have not been established; now, therefore, be it

"RESOLVED, That the House of Delegates of the Iowa State Medical Society delegate to or appoint a committee for the purpose of preparing a schedule of fees for use by the Iowa State Industrial Commission and other governmental agencies in the state to establish minimum charges for the several medical, surgical and dental services which they may require; and be it

"FURTHER RESOLVED, That the assistance of dental colleagues, the insurance carriers, and the chairman of the Iowa State Industrial Commission be solicited."

The Speaker: You have heard this resolution. Do I hear a motion?

Dr. Boice: I move its adoption.

[*The motion was regularly seconded.*]

The Speaker: It is moved that this be adopted. Is there any discussion?

Dr. Brown: The thought occurs to me, would this question be submitted to us for consideration?

The Speaker: Would you ask the question of the author of the resolution?

Dr. Brown: In case this schedule of fees was formulated, would we have an opportunity to approve or disapprove it?

Dr. Jenks: It was our idea that this subject would be introduced before the House of Delegates, referred to the proper committee for discussion, and, then, after the committee had discussed it, brought to the floor for recommendation.

The Speaker: Do you wish it referred to the Committee on Industrial Health? Is that your idea? That would be the proper committee.

Dr. Jenks: I don't know, Dr. Alcock.

The Speaker: But you want it referred to the proper committee. I take it that that would be the proper committee.

Dr. Jenks: I assume so.

The Speaker: That would seem reasonable. There is a motion before the House, and it has been seconded. In order to do this, we will have to withdraw the second and also the motion.

Does the seconder withdraw his second? ["Yes."] Does the mover withdraw his motion? ["Yes."] This will be referred to the Committee on Industrial Health.

Dr. Smith: Mr. Speaker and members of the House, I have been asked to present this resolution for the consideration of the House of Delegates. A group under the presidency of Dr. Paul E. Huston of the Psychiatric Hospital at the University of Iowa has presented this resolution for the consideration of the House:

"Whereas, There has been organized The Iowa Neuropsychiatric Society whose object has been the advancement of the science and practice of psychiatry; and

"Whereas, This Society is composed of about 50 physicians practicing within the state of Iowa; and

"Whereas, This Society has expressed a desire to present programs on neuropsychiatry of interest to the general practitioners and to other medical specialists at the time of the annual state medical meeting; be it

"RESOLVED, That the State Medical Society grant the Iowa Neuropsychiatric Society the privilege of a section in the annual meeting of the State Society."

Mr. Speaker, I *move* the adoption of this resolution and its referral to the proper committee for recommendation.

[*The motion was seconded.*]

The Speaker: It has been moved and seconded that this be adopted. Those in favor say "aye"; contrary "no." This will be referred to the Committee on Arrangements.

Dr. Coleman: Mr. Speaker, members of the House of Delegates and guests, I have been instructed by the council of the Polk County Medical Society to present the following resolution:

"Inasmuch as The Iowa State Medical Society and the House of Delegates of the Iowa State Medical Society have endorsed the American Association of Physicians and Surgeons in principle in a former session; be it

"RESOLVED, Inasmuch as the American Association of Physicians and Surgeons has corrected Section II of its by-laws that were objectionable at that time, that now the House of Delegates of the Iowa State Medical Society give American Association of Physicians and Surgeons full endorsement."

Mr. Speaker, I *move* that this resolution be referred to the proper committee.

The Speaker: It is moved that this be referred to the proper committee for consideration. Do I hear a second?

[*The motion was seconded, put to vote and carried.*]

Dr. Wolfe: Is there any reason why the date of our second meeting could not be determined prior to our first meeting? I am sure the lack of attendance is due to inability to know in advance when it is to be.

The Speaker: That is the next thing to be taken up.

Dr. Wolfe: May I recommend that we establish the time for the second meeting of the House for next year.

The Speaker: Would you like to make that as a motion?

Dr. Wolfe: Yes, I *so move*.

[*The motion was seconded, put to a vote and carried.*]

Dr. Wolfe: As a delegate I have received one

piece of instruction and information from the state office during the entire year. There was a meeting that was of interest to the delegates, to every member of the Society, every officer of the Society, during the year, to which I believe the secretaries and the presidents were invited to attend. I knew nothing about that meeting until it was reported. I think as delegates we have a function to perform besides just convening down here and passing on laws. I would like to know something that is going on during the year before I get down here. I do not know how the other delegates feel, or if they get that information. Maybe that is my fault. I would like to have some information.

Member: We in the counties of southeastern Iowa are in the same predicament. We were told we were invited, but on checking with the secretary and the delegates of Lee, Henry and Des Moines Counties, we were not. I am entirely in agreement with the previous speaker that we would like to know a little more about what is going on.

The Speaker: Anyone else along that line?

Dr. Wolfe: I would like to *move* that all information of general knowledge, of general instruction, that is sent out to the president or the secretary be sent in duplicate to the delegates. Is that in order?

[*The motion was seconded, put to a vote and carried.*]

The Speaker: We move next to the election of the Nominating Committee. Dr. Phillips, will you explain it and explain about the next meeting?

The Secretary: Mr. Speaker and members, the secretary humbly apologizes for not notifying the delegates. We will do so in the future instead of asking the various county society secretaries to notify the various members.

We have to decide now, and in the future we will do it some months in advance, when the second meeting will be. It has been customary in the past to have it on the morning of the last meeting day. Do you want it at 7:00 a. m., 7:30 a. m., 8:00 a. m., 8:30 a. m., 6:30 a. m.? May the Chair have a motion?

[*A motion was regularly made and seconded to meet at 8:00 a. m. on Thursday, April 21.*]

The Secretary: It has been moved that the hour be 8:00 a. m. All those in favor of 8:00 a. m. say "aye"; opposed. *The "ayes" have it.* The meeting will be 8:00 a. m. Thursday in this room.

Member: I think the Constitution calls for that meeting not to interfere with the scientific program.

The Secretary: The program on Thursday morning starts at 9:00 a. m.

The Speaker: We cannot guarantee how long our sessions will last, but we will try to finish in the hour. The next is the election of your Nominating Committee.

The Secretary: The method of appointing the Nominating Committee is that each district assemble in various parts of the room. You each select a member from your district. Please let us know

the names of the committee. That committee then appoints a chairman, and we will expect their report at 8:00 a. m. on Thursday morning.

[The meeting recessed at 10:50 p. m., and the delegates met in district caucus to select a Nominating Committee.]

HOUSE OF DELEGATES

Thursday Morning, April 21, 1949

The final session convened at 8:00 a. m., president-elect Alcock presiding as Speaker.

The Speaker: We have many things to do this morning in an hour's time. Let's make it snappy.

First of all, it has been said that this body has never passed a resolution that we are opposed to socialized medicine. I would like to have Dr. Ober prepare a short but definite motion to that effect. Don't go into a lot of whereases and so on. Bring that in and we will pass it. I promised the Woman's Auxiliary, who made the complaint, that that would be passed unanimously, and, if there was one dissenting vote, there would be an extra doctor's widow in Iowa tomorrow. Will you take care of that, Dr. Ober? Make it short and sweet. The first thing on the agenda is the roll call.

The secretary called the roll, which showed the following persons present:

DELEGATES

Appanoose—J. C. Donahue
Black Hawk—E. L. Rohlf, Jr.
Black Hawk—E. E. Magee
Boone—W. H. Longworth
Bremer—P. J. Amlie
Buchanan—F. F. Agnew
Buena Vista—H. E. Farnsworth
Calhoun—D. C. Carver
Cerro Gordo—C. O. Adams
Cherokee—W. C. Brinegar
Chickasaw—P. E. Gardner
Clayton—P. R. V. Hommel
Clinton—R. F. Luse
Dallas-Guthrie—D. W. Todd
Delaware—R. E. Clark
Des Moines—F. G. Ober
Dickinson—T. L. Ward
Dubuque—F. P. Quinn
Emmet—M. T. Morton
Fremont—Kenneth Murchison
Henry—J. S. Jackson
Iowa—C. F. Watts
Johnson—A. W. Bennett
Johnson—H. R. Jenkinson
Jones—H. F. Dolan
Lee—B. J. Dierker
Linn—C. H. Stark
Lucas—Dean Curtis
Marion—R. V. Mater
Montgomery—Oscar Alden
Muscatine—C. P. Phillips
O'Brien—T. D. Kas
Page—C. H. Flynn
Polk—M. T. Bates
Polk—F. C. Coleman
Polk—Van Robinson
Polk—M. I. Olsen
Polk—H. J. Smith
Pottawattamie—R. M. Collins
Sac—L. B. Amick
Scott—W. C. Goenne
Scott—George Braunlich

Story—J. E. McFarland
Tama—H. S. Bezman
Taylor—G. W. Rimel
Van Buren—L. A. Coffin
Wapello—C. A. Henry
Warren—E. E. Shaw
Washington—E. D. Miller
Webster—E. M. Kersten
Winneshiek—F. A. Hennessy
Woodbury—C. T. Maxwell
Woodbury—F. D. McCarthy
Wright—G. E. Schnug

ALTERNATES

Davis—C. H. Cronk
Decatur—K. R. Brown
Humboldt—C. A. Newman
Jefferson—R. A. McGuire
Linn—L. J. Halpin
Polk—A. L. Jenks

OFFICERS

President—J. E. Reeder
President-elect—N. G. Alcock
Secretary—A. B. Phillips
Trustee—W. A. Sternberg
Trustee—L. R. Woodward
Trustee—B. T. Whitaker
Councilor—C. H. Cretzmeyer
Councilor—J. B. Knipe
Councilor—R. N. Larimer
Councilor—E. F. Beeh
Councilor—J. C. Hill
Councilor—H. A. Housholder
Councilor—C. A. Boice
Councilor—E. B. Howell

The Speaker: The next order of business is the reading of the minutes.

[The secretary read the minutes of the Monday evening session, April 18, 1949.]

The Speaker: Are there any additions or corrections to the minutes? If not, *they stand approved*. The next is the report of the Nominating Committee.

Dr. McFarland: The Nominating Committee met in Parlor A at 11:00 a. m. Tuesday morning, April 19. Those present were P. J. Amlie, of Waverly, G. E. Schnug, of Dows, T. D. Kas, of Sutherland, H. E. Farnsworth, of Storm Lake, J. E. McFarland, of Ames, E. L. Rohlf, Jr., of Waterloo, D. F. Ward, of Dubuque, George Braunlich, of Davenport, J. C. Donohue, of Centerville, G. W. Rimel, of Bedford, and Kenneth Murchison, of Sidney.

Dr. Ward was named chairman and Dr. McFarland, secretary. After due consideration, the following nominations were approved and are hereby submitted to the House of Delegates:

President-Elect—W. C. Goenne, of Davenport, T. C. Thornton, of Waterloo.

First Vice President—E. M. Kersten, of Fort Dodge.

Second Vice President—C. R. Harken, of Osceola. Trustee—R. N. Larimer, of Sioux City.

Councilors:

Third District—J. B. Knipe, of Armstrong.

Eighth District—C. A. Boice, of Washington.

Delegate to the American Medical Association—G. V. Caughlan, of Council Bluffs.

Alternate Delegate—E. E. Shaw, of Indianola.

The Speaker: You have heard the report. Is there a motion to accept this report? The next step

after that is opening it up for nominations from the floor. Do I hear a motion.

Dr. Maxwell: I *move* the report be accepted.

[*The motion was seconded, put to a vote and carried.*]

The Speaker: Next is election of the president-elect. Are there any nominations from the floor? If there are none, then we will vote by ballot on the president-elect. I will appoint as tellers the following individuals: Bennett, Braunlich, Phillips, Shaw, Kersten, Hennessey and Rohlf. The secretary will proceed to tell you how to do it.

The Secretary: Will the tellers come forward and get the ballots and pass them out?

[The ballots were spread, the delegates proceeded to vote, after which the ballots were collected and counted.]

The Secretary: I have an announcement of the number in attendance: delegates, 54; alternates, 6; State Society officers, 14; a total of 74 in attendance.

There were 20 votes for Dr. Goenne and 50 for Dr. Thornton. What is the pleasure of the House?

Dr. McFarland: I would like to *move* that the vote be made unanimous for Dr. Thornton.

[*The motion was seconded, put to a vote and carried.*]

The Speaker: I declare Dr. Thornton elected. Is he in the house?

[The audience arose and applauded as President-Elect Thornton was escorted to the platform.]

Dr. Thornton: Mr. Speaker and members of the House, there are times, I suppose, that occur in the life of everyone when they are unable to express fully the feeling in their hearts. This morning I am overwhelmed.

I realize fully that I had an opponent in this race this morning who is fully qualified in every way, by education, training and experience, to be president of the great Medical Society of the state of Iowa. Therefore, the only excuse I had for contesting with him for this honor was that of all of my father's sons, I love myself the best.

Gentlemen, I want to assure you that I will do everything in my power to aid and, in my humble way, to keep our American way of life ever foremost in our thoughts, and also to do everything I can for the State Medical Society of Iowa.

Thank you very much.

The Speaker: Thornton was a bit choked-up inside. I, too, have been in that same embarrassing predicament, and I know how he feels. We pass now to the election of the first vice president.

Dr. Sternberg: I *move* that the By-Laws be suspended, and the secretary be instructed to cast the unanimous vote of the House for the balance of the slate.

[*The motion was seconded, put to a vote and carried.*]

The Secretary: The secretary hereby casts a unanimous ballot for the remainder of the ticket as follows:

First Vice President—E. M. Kersten, of Fort Dodge.

Second Vice President—C. R. Harken, of Osceola.

Trustee—R. N. Larimer, of Sioux City.

Councilors:

Third District—J. B. Knipe, of Armstrong.

Eighth District—C. A. Boice, of Washington.

Delegate to the American Medical Association—G. V. Caughlan, of Council Bluffs.

Alternate Delegate—E. E. Shaw, of Indianola.

Dr. Larimer: I think there is another order of business. I have been promoted or demoted, and the councilorship for the Fourth District is vacant. That will have to be filled.

The Speaker: Will the Nominating Committee assemble and bring in a nomination for that office? While it is doing that, we will pass on to the next item to save time—supplementary committee reports. Dr. Sternagel!

Dr. Sternagel: I would like to read the report from the Committee on Medical Service and Public Relations on the resolution for a fee schedule for industrial compensation cases introduced into the House of Delegates of the Iowa State Medical Society on April 18, 1949, and referred to this committee for study.

"Whereas, Fees for professional services in industrial accidents are being adjusted amicably by the state industrial commissioner of the state of Iowa after consultation with his medical advisers; and

"Whereas, There exist facilities for appeal to the commissioner when a physician believes that he has been inadequately compensated; and

"Whereas, The preparation of a minimum fee schedule to fit all circumstances and be satisfactory to the physicians in the different areas of Iowa would be difficult; and

"Whereas, There already is in existence in Iowa a confusing array of fee schedules, the addition of another one would only add to the confusion; and

"Whereas, The establishment of a minimum fee schedule for industrial cases at this time might be arbitrarily used by other agencies in Iowa as a maximum fee schedule; now, therefore, be it

"RESOLVED, That this committee does not recommend an industrial fee schedule in Iowa at this time."

Mr. President, I *move* the adoption of these recommendations.

The Speaker: Do I hear a second?

[*The motion was seconded, put to a vote and carried.*]

Dr. Sternagel: The report from the Committee on Medical Service and Public Relations on the resolution for full endorsement by the Iowa State Medical Society of the American Association of Physicians and Surgeons, introduced into the House of Delegates of the Iowa State Medical Society on April 18, 1949:

"Whereas, The Iowa State Society, through its House of Delegates, did endorse in principle the

objectives of the American Association of Physicians and Surgeons in regular session in 1947; and

"Whereas, There is no information available at this time as to how the American Association of Physicians and Surgeons and other similar organizations of medical men opposing socialized medicine can be correlated into the new accelerated program of the American Medical Association without duplication or, perhaps, interference with cooperative effort; now, therefore, be it

"RESOLVED, That this committee recommends that full endorsement of the American Association of Physicians and Surgeons by the Iowa State Medical Society be withheld."

Mr. President, I *move* the adoption of this recommendation.

[The motion was seconded, put to a vote and carried.]

Dr. Thornton: I feel it is my duty to resign as delegate to the American Medical Association, since I have been elevated to president-elect. I therefore offer my resignation.

The Speaker: You have heard what Dr. Thornton said. Do I hear any remarks or a motion?

Dr. Smith: I *move* the resignation be accepted.

[The motion was seconded, put to a vote and carried.]

The Speaker: I will then ask the Nominating Committee to bring in a nomination for this vacancy.

Next, we must take action on the amendments to the By-Laws. I will have the secretary read them.

The Secretary: The first action on the By-Laws is to amend Chapter II, Section 1 of the By-Laws, to correspond to changes being suggested in the Constitution: "The Society shall hold an Annual Session at such time as has been arranged by the Committee on Arrangements and place as has been fixed at the preceding Annual Session by the House of Delegates."

Dr. Boice: Mr. Chairman, those suggested changes in the By-Laws all depend on changes in the Constitution. Since the Constitution cannot be acted on until next year, I suggest that these changes be laid over also.

The Secretary: This really wouldn't be in conflict, Dr. Boice. The ones that conflict are not being read today; they are holding over. Does anyone move that this be accepted?

Dr. Boice: I *move* the adoption of that recommendation for the change in the By-Laws.

[The motion was seconded.]

The Secretary: It has been moved and seconded that Chapter II, Section 1, of the By-Laws be amended as read. All in favor say "aye"; contrary. *It is accepted.*

The second is to amend Chapter IV, Section 6, of the By-Laws to read as follows: "It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body in such a manner that one-half the number, as near as may be, shall be elected each year. The term of office

of these delegates and alternates shall start January 1 following their election."

Dr. Boice: I *move* the adoption of that amendment.

Dr. Sternberg: I *second* it.

The Secretary: It has been moved and seconded that this be adopted. All in favor say "aye"; opposed. *It is carried.*

Amend Chapter VI, Section 5, of the By-Laws by inserting the following sentence after the first sentence in the second paragraph: "Any proposal to appropriate funds other than for the usual running expenses of the Society and Journal shall be presented in a separate resolution."

Dr. Boice: I *move* the adoption of that amendment.

Dr. Sternberg: I *second* it.

The Secretary: It has been moved and seconded that this be accepted. All in favor say "aye"; opposed. *It is carried.*

Amend Chapter VI, Section 5, third paragraph, by adding the following phrase: "Except that should a vacancy occur in the office of president-elect by reason of death or total incapacity of the incumbent, or for any other reason, the House of Delegates shall be called into session within fifteen days to name a president-elect."

The Speaker: May I add just a word there? I am very glad I did not bring a condition about where you had to use this.

Dr. Sternberg: I *move* its adoption.

[The motion was seconded, put to a vote and carried.]

The Speaker: The Nominating Committee is ready to report.

Dr. McFarland: The Nominating Committee wishes to report the nomination of Dr. W. L. Downing, of LeMars, as the fourth district councilor to replace Dr. Larimer, and the nomination of Dr. E. E. Shaw, of Indianola, as the delegate to replace Dr. Thornton, resigning.

Dr. Sternberg: I *move* the adoption of the report.

[The motion was seconded, put to a vote and carried.]

Dr. McFarland: That automatically creates a vacancy. The Nominating Committee wishes to present the name of Dr. E. L. Rohlf, Jr., of Waterloo, as the alternate delegate to the American Medical Association.

Dr. Sternberg: I *move* the report of the Nominating Committee be accepted.

[The motion was regularly seconded, put to a vote and carried.]

The Secretary: Gentlemen, the secretary is casting a unanimous ballot for Dr. Downing, fourth district councilor; Dr. E. E. Shaw, delegate; Dr. E. L. Rohlf, Jr., alternate.

The Speaker: Are there more reference reports? We have had two of them. There is one left, and that is on the establishment of a neuropsychiatric section. Is it necessary to read that one?

The Secretary: It has been referred to the Committee on Arrangements.

The Speaker: Then there is nothing for us to do?

The Secretary: Not that I know of.

Dr. Sternberg: Mr. Chairman, members of the House of Delegates, representing the Board of Trustees this morning, I want to call your attention to a matter that has come up for our consideration.

Either last year or the year before the centennial meeting which occurs next year was discussed along with a report on the hundred years of the Society. A committee, of which Dr. Bierring is chairman, has been working upon a centennial volume, and we feel it is doing a good job. Of course, it is up to the Board of Trustees to pay for this volume.

The Society ran behind \$5,000 last year—\$2,500 of it being the *Cancer Manual*. We feel that was an excellent publication and well worth the money. Another big expenditure was \$1,700 for legal help in a case in which we received a jury verdict in our favor, which we feel was well worth the money.

We have a surplus to meet such situations, and we were glad to pay those bills. We are facing a deficit this year, also. That was the reason for asking you to increase the dues, which you so kindly did.

We feel that material for this centennial volume should be published. If it is run in the Journal, it will cost about \$4,200. If it is put out in a bound volume, it will cost about \$6,000. The Board of Trustees does not want to assume responsibility for paying this bill without your recommendation, because it is your privilege to express an opinion when there is an unusual expenditure of money.

The Board of Trustees has studied the thing very carefully; we have consulted with Dr. Bierring about the matter, and Dr. Bierring thinks that he can get out this volume for about \$6,000. This will provide each one of you with a copy, free of charge.

We feel book form is preferable to publication in the Journal, because that book will be a matter of record, something that can be preserved. The Journal might be misplaced, but a bound volume will perpetuate the matter forever.

We are willing to pay up to \$6,000 for that volume, and we ask your opinion. Dr. Bierring is here. I wonder if I could ask him to say a few words to you about this matter.

Dr. Bierring: Dr. Sternberg, Mr. Speaker, members of the House, in accordance with the existing calendar, a centennial comes only once in a hundred years. It marks an epoch in Iowa medicine as well as in American medicine.

Just three years following the organization of the American Medical Association in Philadelphia in 1847, here in this western state having a population of less than 50,000 there was organized the Iowa State Medical Society, the same year as in the sister state of Illinois, much larger and much more prosperous.

Not only is it the history of one hundred years of American medicine; it is one hundred years of Iowa medical journalism, because in that year the first medical journal west of the Mississippi River was published at Keokuk, Iowa, in September, 1850.

We hope, we feel, that a record of the achievements of Iowa medicine out here in this pioneer country means something to the future of Iowa medicine. It is a legacy that is passed on to the young physicians. It would be a story of the trials of the pioneer doctor, the development of the most modern system of medical training in that period of time, of the highest ideals of practice, the preservation of all those hopes and ideals that are a part of every doctor.

We would like to publish a volume that will be a continuous story, that will tell the tale of what we have done in one hundred years.

We would like to inscribe each volume by number for the individuals in good standing in this Society, and, likewise, be able to distribute copies to the libraries, principal medical libraries of the country, including the Surgeon's General Library, to each state medical society, and possibly each of the provincial societies of Canada. We feel that it, in itself, will increase the prestige of this Society, and it will show that Iowa medicine has really done something for the development of medicine in this country.

We assume the responsibility of this publication. We may not make it as large as we thought it would be, but it will be presented to you in concrete, readable form. We feel it will be something you will treasure. It will be an addition to your library. It will be something that you can pass on to those that follow.

I hope, therefore, that you will feel it is a worthy thing. We feel that it is necessary to have your decision now, because this material must be ready by September first if we are to have this volume ready for you at Burlington for the meeting next spring.

The Speaker: Dr. Sternberg, you want the expression of the House of Delegates for the approval of your spending up to \$6,000 for this project?

Dr. Sternberg: That is right.

The Speaker: Do you want it in the form of a motion?

Dr. Sternberg: I think it will be better. Then the House of Delegates is on record.

Dr. Boice: I will make the motion, Dr. Alcock, as you quoted it.

The Speaker: All right. Do I hear a second?

[The motion was seconded, put to a vote and carried.]

The Speaker: The next order of business is selection of the meeting place for 1950. Dr. Ober, do you have something to say on that?

Dr. Ober: Inasmuch as the Iowa State Medical Society met first in Burlington, in 1850, we would appreciate it very much if you would honor us with your presence for the centennial meeting next year.

As a representative of Des Moines County, I ex-

tend to you an invitation to meet with us at Burlington at that time.

The Speaker: It has been more or less taken for granted that we were going down there next year, and there isn't very much you can do about it, because you can't get dates for it in Des Moines now. Do I hear a motion that we go to Burlington next year?

Dr. Smith: I *move* we accept the invitation of Burlington to meet there.

[*The motion was seconded.*]

The Speaker: All those in favor say "aye"; contrary "no." *The motion is carried.*

It is becoming increasingly difficult to arrange housing facilities for this meeting, and we should have more than a year for the arrangements. Do I hear any invitations for 1951?

Dr. Maxwell: Mr. Chairman, we of Woodbury County would like to invite the convention two years from now to meet in Sioux City.

The Speaker: For 1951?

Dr. Maxwell: Yes, 1951.

The Speaker: Are there any other cities that would like to be bothered by us? I don't know why anybody wants us. Do I hear a motion to accept Sioux City's invitation for 1951?

[*A motion was regularly made and seconded to accept the invitation to meet in Sioux City in 1951.*]

The Speaker: All those in favor say "aye"; contrary "no." *It is carried.*

Next is new business. I ask authority for appointing a Special Committee on General Practice. I would like to have a motion to that effect. Will somebody make that motion?

[*A motion was made and seconded.*]

The Speaker: Those in favor say "aye"; opposed "no." *It is carried.*

Dr. Farnsworth: Mr. Speaker, I have a resolution to present to the House of Delegates. At a meeting of the Iowa Neuropsychiatric Society, held April 20, we were asked as a committee to bring the following resolution to you for action:

"Whereas, The care of the mentally ill is not on a par with care of medical and surgical cases in the state of Iowa; and

"Whereas, There have been great advances in the field of neuropsychiatry in recent years, and this is not made available to care of the mentally ill in our state because of lack of understanding of the needs and possibilities in the field; and

"Whereas, Education and more ample appropriation of funds would remedy these faults; therefore, be it

"RESOLVED, That a special committee of the House of Delegates be appointed. Its function shall be to advise the House of Delegates, its Legislative Committee, and governmental bodies on matters pertaining to the care of the mentally ill in Iowa."

That is signed by the committee.

Mr. Chairman, I *move* the adoption of the resolution.

[*The motion was seconded.*]

Dr. Brinegar: May I have three minutes to discuss that resolution?

The Speaker: Yes.

Dr. Brinegar: I am also superintendent of one of our state hospitals and a member of the Iowa Neuropsychiatric Association which sent you this resolution. I have talked to a number of the members of this Society privately and asked them to guess how much money we have to spend in hospitals per capita per day, and I am amazed by the lack of information that our membership has. Most of them guess around \$4.50. The actual figure for next year is \$1.67.

Most of you gentlemen are associated with general hospitals and have a pretty good idea what it costs to run a hospital. It does not take much stretch of the imagination to know what kind of a hospital you can run for \$1.67 a day.

I feel that the House of Delegates, as well as the membership of the Society should know the facts. I also feel that the Medical Society has not taken the interest in this problem that it should have in the past and hope it will take more interest in the future. There is a lot the Society can do through its House of Delegates and through its Legislative Committee, particularly, to inform the medical profession and the public of Iowa of the lack of appropriations that we have for running our mental hospitals.

I think that is all I have to say, Dr. Alcock. I see Dr. Render, superintendent of one of our hospitals, is here.

The Speaker: We would be very glad to have him speak.

Dr. Render: Mr. President, members of the House of Delegates, it is evident that members of our legislature do not come in sufficient numbers to visit our mental hospitals personally and inform themselves of our needs. It is, of course, impossible for them to do so in between sessions of the legislature, and it is evident that these men need advice from interested people in their duties toward the care of the mentally ill in our state. I know of no better advisers than members of the Iowa Medical Society, who have the care of the health of our citizens at heart, and I take pleasure in supporting Dr. Brinegar's kind invitation to speak before you today and favor a committee from your House of Delegates to act as advisers to our State Board of Control and to members of our legislature and to the executive officers of Iowa in matters pertaining to the care of the mentally ill in Iowa. I thank you.

The Speaker: I can assure you that we appreciate your presenting this to us, and I know that we are all cognizant of the need of the increased appropriations for the care of the mentally sick. I know that will have the endorsement of every member of the Iowa State Medical Society. Will you read it again so that we can get it clearly before us?

The Secretary: "Therefore, be it RESOLVED, That a special committee of the House of Delegates be appointed. Its function shall be to advise the

House of Delegates, its Legislative Committee, and governmental bodies on matters pertaining to the care of the mentally ill in Iowa.”

The Speaker: All those in favor say “aye”; contrary “no.” *It is carried.*

Dr. Quinn: The resolution I have here is rather distasteful. It is directed to the Chairman and Board, State University Hospital, Iowa City, Iowa.

“Gentlemen:

“The Dubuque County Medical Society, in session on April 12, 1949, had brought to its attention, by members of the Society, the fact that some patients referred to the Medical Department of the State University Hospital were, when discharged, referred, or suggestively referred to other physicians rather than to the physician who referred the case to them. This, of course, met with decided disapproval on the part of the members of the Society, and it unanimously voted that the Board of Censors bring to your attention, as well as to the Dean of the Iowa State College of Medicine, the Iowa State Board of Education, and the Governor of the State of Iowa, the facts, as brought out in this meeting.

“The Society also voted that the delegate from Dubuque County to the House of Delegates of the Iowa State Medical Society bring this matter before the House at the meeting this week.

“We sincerely regret the necessity of having to call your attention to this matter, which we feel should be corrected now.

“The Board of Censors have decided that it will not be necessary to take this matter up with the Governor, for we feel that this will be corrected at an early date by you.

“Ray R. Harris, M.D., Chairman
Walter Cary, M.D.
H. A. Stribley, M.D.”

It seems to be a roundabout way. If I ever referred a case to Dr. O'Brien or Dr. Lierle, and it did not come back to me, I would settle it very shortly without going through this formula.

The Speaker: May I reply to this? You are perfectly justified in this complaint, and I think it does a great deal of good. This matter has been taken up by the medical council of the Medical School, by the dean, and it involves one of our very difficult problems.

As I said to you Monday evening, our faculty, including myself, must be educated, and we are doing that all of the time, but I will challenge anyone to get by without making mistakes like these, particularly when we are dealing with young fellows coming in just after their internship.

I am glad this has come up, because it will be a concrete thing that we can use down there, and we will use it. I will promise you that.

Dr. Quinn: I appreciate that.

The Speaker: Next is the reading of the appointments to committees for 1949-1950.

The Secretary: First, Dr. C. A. Henry, of Farson, presents a bill to amend the By-Laws of the Iowa State Medical Society.

“Amend Chapter IV, Section 1, of the By-Laws to read as follows:

“ (a) The House of Delegates shall meet annually at 8:00 p. m. on the day preceding the first day of the annual session. The place of the meeting of the House of Delegates shall be the place where the annual meeting of the State Society is to convene.

“ (b) The House of Delegates shall transact such business as may occur under the Constitution and By-Laws of the Society. At the close of this meeting, there shall be selected, by written ballot, by the delegates of each Councilor District in separate caucuses, a Committee on Nominations consisting of eleven delegates, one from each Councilor District. The District Councilor shall preside at the caucus meeting of his district. If the Councilor is absent, the delegates present at the caucus shall appoint one of the members to preside.

“ (c) The Committee on Nominations shall meet at 1:00 p. m. on the first day of the annual session of the State Society. After the welfare of the profession for the ensuing year has been carefully considered, the committee shall place in nomination for president-elect the names of two or more members of the Society who have been members in good standing for five years or more, and one member of like qualification for each of the other state offices to be filled at that annual election.’

“Substitute the following paragraph for Section 3, Chapter V:

“ (a) The House of Delegates shall convene at 8:00 a. m. on the second day of the annual session of the State Society. The report of the Committee on Nominations and the election of officers shall be the first order of business after the reading of the minutes of the previous meeting.

“ (b) The Committee on Arrangements shall arrange the program for the annual session so that delegates may attend the first general meeting of the Society, hear the address of the president, and other annual orations and such scientific proceedings and discussions as are consistent with their duties.’”

The Speaker: This will be held over until the next meeting of the House of Delegates.

The Speaker: Is there any more new business? If not, we will proceed with the appointment of committees for 1949-1950.

[The Secretary read the committee appointments for 1949-1950 as follows:]

COMMITTEE APPOINTMENTS FOR 1949-1950
STANDING COMMITTEES

CONSTITUTION AND BY-LAWS

G. C. Albright Iowa City
J. D. Conner Nevada
D. F. Rodawig Spirit Lake

FINANCE

E. C. McClure Bussey
A. S. Bowers Orient
A. J. Gantz Greenfield

LEGISLATIVE

J. W. Billingsley	Newton
R. L. Parker	Des Moines
C. W. Losh	Des Moines

MEDICOLEGAL

L. K. Meredith	Des Moines
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MEDICAL EDUCATION AND HOSPITALS

G. H. Scanlon	Iowa City
F. C. Coleman	Des Moines
F. G. Ober	Burlington

MEDICAL SERVICE AND PUBLIC RELATIONS

Fred Sternagel	West Des Moines
Martin I. Olsen	Des Moines
R. D. Bernard	Clarion
C. T. Maxwell	Sioux City
R. C. Gutch	Chariton
D. C. Conzett	Dubuque
E. E. Shaw	Indianola
H. E. Stroy	Osceola
C. A. Nicoll	Panora
James E. Reeder	Sioux City

SPECIAL COMMITTEES

BALDRIDGE-BEYE MEMORIAL

J. W. Agnew	Davenport
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CANCER

F. H. Beaumont	Council Bluffs
D. R. Ward	Dubuque
E. D. Plass	Iowa City
A. W. Erskine	Cedar Rapids
E. G. Zimmerer	Des Moines
H. W. Morgan	Mason City
V. W. Petersen	Clinton
W. J. Balzer	Davenport
S. F. Singer	Ottumwa
A. L. Jenks, Jr.	Des Moines

FRACTURE

F. G. Ober	Burlington
F. L. Knowles	Fort Dodge
L. R. Martin	Council Bluffs
D. C. Wirtz	Des Moines
J. W. Graham	Sioux City

HISTORICAL

W. L. Bierring	Des Moines
Jeannette Dean-Throckmorton	Des Moines
C. A. Henry	Farson
C. L. Jones	Gilmore City
L. C. Kern	Waverly
J. T. McClintock	Iowa City
E. M. George	Des Moines
C. A. Boice	Washington

INDUSTRIAL HEALTH

H. H. Smead	Des Moines
C. J. Lohmann	Burlington
R. K. Keech	Cedar Rapids
L. J. Miltner	Davenport
E. L. Rohlf, Jr.	Waterloo
E. E. Morgan	Sioux City

MATERNAL AND CHILD HEALTH

R. M. Collins	Council Bluffs
H. A. Weis	Davenport
H. E. Farnsworth	Storm Lake
R. H. McBride	Sioux City
L. F. Hill	Des Moines
C. P. Phillips	Muscatine
J. F. Gerken	Waterloo
R. O. Hughes	Ottumwa

NATIONAL EMERGENCY MEDICAL SERVICE

L. A. Coffin	Farmington
F. M. Burgeson	Des Moines
E. S. Korfmacher	Grinnell
J. E. Houlahan	Mason City

SCIENTIFIC EXHIBIT

Cecil C. Jones	Des Moines
G. D. Jenkins	Burlington
J. K. Stewart	Clinton
R. F. Birge	Des Moines

SPEAKERS BUREAU

D. N. Gibson	Des Moines
J. I. Marker	Davenport
H. M. Korns	Dubuque
R. N. Larimer	Sioux City
J. H. Allen	Iowa City
Charlotte Fisk	Des Moines
F. R. Peterson	Cedar Rapids

GENERAL PRACTICE

C. A. Nicoll	Panora
E. E. Shaw	Indianola
A. D. Woods	State Center
J. S. Jackson	Mt. Pleasant
D. G. Sattler	Kalona

TUBERCULOSIS

R. J. Harrington	Sioux City
J. C. Painter	Dubuque
J. C. Parsons	Des Moines
L. J. Galinsky	Des Moines
R. E. Smiley	Mason City
William Spear	Oakdale
D. R. Webb	Cedar Rapids

SECTION CHAIRMEN

Medical	L. W. Swanson, Mason City
Surgical	R. T. Tidrick, Iowa City
Eye, Ear, Nose and Throat	G. J. Pearson, Burlington

The Secretary: Do I have a motion for approval?

[A motion for approval was regularly made and seconded.]

The Secretary: It has been moved and seconded that these committee appointments be approved. Are there any corrections or additions? All those in favor of the motion say "aye"; contrary. *It is carried.*

The Speaker: Dr. Ober, are you ready with your resolution?

Dr. Ober: Dr. Alcock asked for a short one, so here it is:

"Whereas, Since it is the conviction of the members of the Iowa State Medical Society that the present proposed health legislation conflicts with the American way of life; be it, therefore,

"RESOLVED, That the Iowa State Medical Society be on record as being unreservedly opposed to

compulsory health insurance and socialistic endeavor in all of its phases."

I *move* its acceptance.

Dr. Sternberg: I *second* the motion.

The Speaker: Is there any discussion? All those in favor say "aye"; contrary "no"—and I dare anybody to vote against it. The motion is carried.
[The meeting adjourned at 9:10 p. m.]



Presidents of the Iowa State Medical Society

(Left to right) *Front Row*: Gordon F. Harkness, 1935; James E. Reeder, 1949; Walter L. Biering, 1908; Nathaniel G. Alcock, 1950; Lee R. Woodward, 1944. *Middle Row*: Arthur W. Erskine, 1939; Channing G. Smith, 1932; Charles B. Taylor, 1934; Thomas A. Burcham, 1936; Felix A. Hennessy, 1940. *Back Row*: Robert L. Parker, 1947; Ransom D. Bernard, 1946; Prince E. Sawyer, 1937; Harold A. Spilman, 1948.

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THE JOURNAL

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1949



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as of

June 21, 1949

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 Bosch, Calvin C. F., Sibley
 Boshingham, Earl N., Clarinda
 Boshingham, Ottmer N., Clarinda
 Boston, Burr C., Waterloo
 Boulware, Lois, Iowa City
 Bourke, William W., Knoxville
 Bourn, Melvin G., Algona
 Bovenmyer, DeVoe O., Ottumwa
 Bowen, Frederick S., Woodburn
 Bowers, Arthur S., Orient
 Bowers, Bert A., Sioux City
 Bowers, Clifford V., Sioux City
 Bowers, Henry W., Nevada
 Bowie, Louis L., Marshalltown
 Bowman, Fred A., Leon (L.M.)
 Bowser, William F., Davenport
 Boyce, David C., Iowa City
 Boyd, Eugene J., Iowa City
 Boyd, Julian D., Iowa City
 Boyer, Edward H., Mason City
 Boyer, Howard C., Council Bluffs (L.M.)
 Boyer, Ulysses S., Davenport
 Bradford, Clyde R., Des Moines
 Bradley, Carl L., Newhall
 Braunlich, George, Davenport
 Brecher, Paul W., Storm Lake
 Brereton, Harold L., Emmetsburg
 Brewster, Calvin O., Britt
 Bridgeman, Harry L., Knoxville (L.M.)
 Bries, Frank J., North Buena Vista
 Brincko, John, Burlington
 Brinegar, Willard C., Cherokee
 Brink, Raymond J., Ayreshire
 Brinker, Marion H., Jefferson
 Brinkman, William F., Pocahontas
 Brinznall, Edgar S., Iowa City
 Brisbane, Royal E., Burbank, Calif. (L.M.)
 Brobyn, Thomas E., Grinnell
 Broderick, Clarence E., Cherokee
 Brody, Sidney, Ottumwa
 Broman, John A., Maquoketa
 Brotman, Milton, Iowa City
 Brown, Addison W., Des Moines
 Brown, Arthur C., Council Bluffs
 Brown, Carroll A., Sioux City
 Brown, Gates M., Dayton
 Brown, Harold L., Sioux City
 Brown, Harry W., Des Moines
 Brown, Ivan E., Spencer
 Brown, Kenneth R., Leon
 Brown, Merle J., Davenport
 Brown, Roy G., Jr., Onawa
 Brown, Wayne E., Mount Pleasant
 Brown, Willis E., Little Rock, Ark.
 Brownstone, Manuel, Clear Lake
 Brownstone, Sidney, Clear Lake
 Brubaker, Carl F., Corydon
 Bruce, James H., Fort Dodge
 Bruechert, Henry N., Parkersburg
 Brumer, Herbert B., Clinton
 Brummitt, Charles F., Centerville
 Brundige, Ralph E., Akron
 Bruner, Julian M., Des Moines
 Brunk, Amos W., Prescott
 Brunner, Walter J., Akron
 Brush, C. Herbert, Shenandoah
 Buchanan, John J., Milford
 Buckley, Charles E., Blockton
 Buckmaster, Raleigh A., Dunkerton
 Bullock, Alfred L., Cushing
 Bullock, Grant D., Inwood
 Bullock, William E., Lake Park
 Bunch, Harold M., Shenandoah
 Bunge, Raymond G., Iowa City
 Burbank, Dean S., Pleasantville
 Burbank, Sylvia J., Birmingham, Ala.
 Burch, Earl S., Dayton
 Burcham, Thomas A., Des Moines
 Buresh, Abner, Lime Springs
 Burgess, Floyd M., Des Moines
 Burgess, Arthur W., Iowa Falls
 Burke, Edmund T., Des Moines
 Burke, Thomas A., Mason City
 Burleson, Marvin W., Fort Dodge
 Burns, Harry, Des Moines
 Burnside, Raymond A., Des Moines
 Burr, Charles L., Des Moines
 Burroughs, Hubert H., Sioux City
 Bursheim, Peder J., Des Moines
 Burt, Charles W., West Des Moines
 Bush, Earl B., Ames
 Bushmer, Alexander, Orange City
 Bushnell, John W., Sioux City
 Butler, Margaret K., Fort Dodge
 Butterfield, Edwin J., Tucson, Ariz. (L.M.)
 Buxton, Otho C., Jr., Webster City
 Buzard, Irenarch S., Jefferson (L.M.)
 Byers, Albert G., Coggon
 Byers, Bert H., Manchester
 Byrnes, Clement W., Dunlap
 Cahill, John A., Dubuque

Cahn, Philipp, Oakdale
Calbreath, Lloyd B., Humeston
Callahan, George D., Iowa City
Camp, Donald E., West Union
Camp, John R., Thompson
Campbell, Nathan, Yarmouth
Campbell, Thomas R., Sioux Rapids
Campbell, Walter V., Oskaloosa
Cantrell, Carmi M., Iowa City
Cantwell, John D., Davenport
Carey, Edward T., Clinton
Carey, Michael J., Council Bluffs
Carlile, Amos W., Manning
Carlson, Elmer H., Muscatine
Carlson, Frank G., Mason City (L.M.)
Carney, Robert G., Iowa City
Carney, Roscoe P., Jr., Davenport
Carpenter, Fred E., Newton
Carpenter, Ralph C., Marshalltown
Carr, Leslie L., West Union
Carr, Thomas L., Iowa City
Carrigg, Lawrence G., Cedar Rapids
Carroll, Thomas J., Sibley
Carrier, Carl H., Des Moines (L.M.)
Carson, Andros, Des Moines (L.M.)
Carstensen, Albert B., Linn Grove
Carstensen, Vincent H., Waverly
Carter, John R., Iowa City
Carver, David C., Rockwell City
Carver, William F., Fort Dodge (L.M.)
Cary, Walter, Dubuque
Cash, Paul T., Des Moines
Cash, William H., Lenox
Cashman, Chester F., Hartley
Castell, John W., Fairfield
Castles, William A., Dallas Center
Catalona, William E., Muscatine
Catlin, Karl A., Clarinda
Catterson, Leroy F., Oskaloosa
Coughlan, Gerald V., Council Bluffs
Cauley, Francis P., Anthon
Caulfield, John D., New Hampton
Chadbourne, Theodore L., Vinton (L.M.)
Chain, Leo W., Dedham
Challed, Don S., Cedar Rapids
Chambers, Charles L., Des Moines
Chambers, James W., Des Moines
Chapler, Keith M., Dexter
Chapman, Frederick J., Keokuk
Chapman, Robert M., Cedar Rapids
Chase, Sumner B., Fort Dodge
Chase, Walter E., Rippey
Chase, William B., Des Moines
Chase, William B., Jr., Des Moines
Chenoweth, Charles E., Mason City
Chesnut, Paul F., Winterset
Chester, Walter S., Albia
Childs, Hal A., Creston (L.M.)
Chittum, John H., Wapello (L.M.)
Chittum, Josiah M., North Liberty
Christensen, Emil M., Garner
Christensen, Eunice M., Spencer
Christensen, Everett D., Spencer
Christensen, John R., Eagle Grove
Christiansen, Charles C., Grand Mound
Christiansen, John E., Durant
Church, Bill G., Des Moines
Clapsaddle, Dean W., Clear Lake
Clapsaddle, John G., Burt
Clark, Clayton W., Nashua
Clark, Frank H., Clarinda
Clark, George H., Oskaloosa
Clark, Howard F., Stuart
Clark, James P., Estherville
Clark, Orson W., Ogden
Clark, Richardson E., Manchester
Clark, Thomas D., Victor
Clary, William H., Prescott (L.M.)
Clasen, Henry W., Cedar Falls
Closson, Charles L., Walker
Cmeya, Patrick M., Sioux City
Cobb, Elliott A., Cedar Rapids
Cobb, Elliott C., Sioux City
Coburn, Frank E., Iowa City
Cochran, J. Lawrence, Carroll
Coddington, James H., Humboldt
Cody, William E., Sioux City
Coffin, Lonnie A., Farmington
Cogley, John P., Council Bluffs
Cohen, Sidney A., Council Bluffs
Colbert, Lawrence D., Royal
Cole, Elmer J., Woodbine (L.M.)
Cole, Fern N., Iowa Falls
Cole, Harold P., Thurman
Cole, Julia, Ames
Coleman, Francis C., Des Moines
Coleman, Thomas G., Iowa City
Collins, Harry A., Des Moines
Collins, Loren E., Estherville
Collins, Robert M., Council Bluffs
Collins, Robert M., Oskaloosa
Conaway, Aaron C., Marshalltown
Conkling, Russell W., Des Moines
Conley, Robert M., Perry
Conlon, James B., Council Bluffs
Conmey, Roy M., Sergeant Bluff
Connell, John, Des Moines
Connely, Edgar J., Dubuque
Conner, John D., Nevada
Conzett, Donald C., Dubuque
Cook, Clarence P., Des Moines (L.M.)
Cook, Kenneth G., Fairfield
Cook, R. Sanford, Tipton
Cook, Stuart H., Rock Rapids
Cooper, Clark N., Waterloo
Cooper, Gladys A., Red Oak
Cooper, James S., Burlington
Cooper, Jay C., Villisca
Cooper, Raymond E., Keokuk
Cooper, Wayne K., Cedar Rapids
Corbin, Sylvanus W., Corydon
Coceran, Thomas E., Iowa City
Cords, Charles H., Rudd
Corn, Henry H., Des Moines
Cornell, Corwin S., Knoxville
Coughlan, Charles H., Fort Dodge
Coughlan, Daniel W., Des Moines
Coulson, Forest H., Burlington
Cox, Elmer L., Moulton
Coyne, Kenneth M., Burlington
Crabb, George M., Mason City
Crain, Lewis F., Deep River (L.M.)
Crain, Mattie M., Deep River (L.M.)
Cramer, Richard A., Cedar Falls
Crawford, Jennings, Cedar Rapids
Crawford, Robert H., Burlington
Cressler, Frank E., Churidan
Cretzmeyer, Charles H., Algona
Cretzmeyer, Francis X., Emmetsburg
Crew, Arthur E., Marion
Crew, Morton R., Clearfield
Crew, Philip, Marion
Cronk, Charles H., Bloomfield (L.M.)
Cross, Donald L., Boone
Cross, Kenneth R., Des Moines
Crow, George B., Burlington
Crow, Ira N., Fairfield
★Crowder, Roy E., Long Beach, Calif.
Crowe, Denvil F., Templeton
Crowley, Daniel F., Des Moines
Croxdale, Edward L., Villisca
Crumpton, Robert C., Webster City
Cruzen, John L., Barnes City
Cullen, Stuart C., Iowa City
Cunningham, Glenn D., Davenport
Cunningham, Melvin B., Norwalk
Curtis, Dean, Chariton
Cusick, George W., Davenport
Dahl, Harry W., Des Moines
Dahlbo, John E., Sutherland
Dahlquist, Ralph M., Decorah
Dalbey, Glenn M., Traer
Danielson, May, Clinton
Danley, Royal C., Hamburg
Darling, John P., Mason City
Darrco, Clarence, Dubuque
Daut, Richard V., Davenport
Daut, Walter W., Muscatine
Davey, William P., Sioux City
Davidson, Maurice C., Milton, Mass.
Davidson, Thorald E., Mason City
Davis, Arthur E., Seymour
Davis, Charles M., Centerville
Dawson, Emerson B., Fort Dodge
Dawson, Leon E., Des Moines
Day, Charles S., Cedar Rapids
Day, Philip M., Oskaloosa
Dean, Abbott M., Council Bluffs
Dean, Frank W., Council Bluffs (L.M.)
Dean, Ray H., Washington (L.M.)
Dean, William F., Osceola (L.M.)
DeCicco, Ralph, Greenfield
Decker, Charles E., Davenport
Decker, Henry G., Des Moines
Decker, Jay C., Sioux City
Deering, John S., Onawa
DeGowin, Elmer L., Iowa City
Demaree, Chester, Lacona
DeMeulenaere, John C., Grinnell
Denneny, Benjamin F., Britt
Dennison, John C., Bellevue (L.M.)
Deranleau, Robert F., Perry
Derby, Helen J., Iowa City
DeShaw, Earl H., Monticello
Des Marias, Varina, Grundy Center
Devereux, Richard L., Sioux City
Deweese, Frank L., Keokuk
Dewey, Jay R., Schaller
Dewitt, Charles H., Macedonia
DeYarman, Kyle T., Morning Sun
DeYoung, Ward A., Glenwood
Diddy, Keith W., Perry
Dierker, Bernard J., Fort Madison
Dierker, Frank H., Fort Madison
Dierker, LeRoy J., Fort Madison
Dimsdale, Lewis J., Sioux City
Dingman, Marshall E., Urbana
Ditto, Boyd L., Burlington
Dixon, George L., Tucson, Ariz. (L.M.)
Doane, Grace O., Des Moines
Dobias, Stephen G., Chelsea
Dobson, Richard A., Sioux City
Dodge, Lynn, Ames
Doering, Valentine T., Fort Madison
Dolan, Henry F., Anamosa
Dolan, Thomas R., Anamosa
Doles, James W., Knoxville
Dolmage, George F., Buffalo Center
Dolmage, George H., Mason City
Donahue, James C., Centerville
Donlan, Eugene V., Clinton
Donlin, Robert E., Harlan
Donnelly, Bernard A., Iowa City
Donohoe, Anthony P., Davenport
Donohue, Edmund S., Sioux City
Donovan, William H., Iowa City
Dooley, John E., Des Moines
Doornink, William, Orange City
Dorney, Ralph A., Des Moines
Dorsey, Thomas J., Fort Dodge
Doss, W. Gordon, Mount Ayr
Doss, W. Norman, Leon
Doster, Mildred, Washington
Douvas, Nicholas G., Iowa City
Down, Howard I., Sioux City
Downing, Arthur H., Des Moines
Downing, James A., Des Moines
Downing, John S., Cedar Rapids
Downing, Leroy M., Cedar Rapids
Downing, Wendell L., LeMars
Downs, Vernon S., Ottumwa
Dressler, John B., Ida Grove
Drew, Edward J., Des Moines
Drier, William C., Waterloo
Driver, Richard W., Waterloo
Dulin, Evelyn H., Iowa City
Dulin, John A., Sigourney
Dulin, John W., Iowa City
Dulin, Tarana J. G., Sigourney
Duling, Raymond J., Sioux City
Dulmes, Abraham H., Klemme
Dunlap, Wallace A., Des Moines (L.M.)
Dunkel, George K., Fairfield
Dunn, Francis C., Cedar Rapids
Dunn, James, Davenport
Dunner, Ada, Des Moines
Dusdieker, Stanley W., Des Moines
Dushkin, Milton A., Des Moines
Dutton, Dean A., Van Horne
Dvorak, Joseph E., Sioux City
Dwyer, Bernard B., Preston
Dwyer, Robert E., Clinton
Dyke, Lester M., Sheldon
Dyson, James E., Des Moines
Eastburn, Harvey B., Burlington
Eaton, Robert C., Clarion
Ebersole, Francis F., Mount Vernon
Edington, Frank D., Spencer
Edmonds, Charles W., Cherokee
Edwards, Charles V., Council Bluffs
Edwards, Ralph R., Centerville
Egan, Thomas J., Bancroft
Egbert, Daniel S., Fort Dodge
Egermayer, George W., Elliott
Eggleston, Alfred A., Burlington
Egloff, William C., Mason City
Ehrenhaft, Johann L., Iowa City
Eichenlaub, John E., Ackley
Eiel, John O., Osage
Eiel, Merrill O., Osage
Elkins, Higdon B., Iowa City
Eller, Lancelot W., Kanawha
Eller, William C., Waterloo
Elliott, Olin A., Des Moines
Ellis, Coburn H., Webster City
Ellis, Howard G., Des Moines
Ellison, George M., Clinton
Ellyson, Charles W., Waterloo
Ellyson, Craig D., Waterloo
Ely, Francis A., Des Moines (L.M.)
Emanuel, Dennis G., Ottumwa
Emerson, Edward L., Muscatine
Emmons, Marcus B., Clinton
Engelmann, Andrew T., Sioux City
Enna, Melchior D., Dumont
Ennis, Harry H., Decorah
Ensley, Bruce, Shell Rock
Entringer, Albert J., Dubuque
Entz, F. Harold, Waterloo
Ergenbright, Willard V., Iowa City
Ericsson, Martin G., Cedar Falls
Erikson, Roland E., Davenport
Erskine, Arthur W., Cedar Rapids
Evans, Farris D., Wichita, Kan.

Evans, Harold J., Davenport
 Evans, John G., New Hartford (L.M.)
 Evans, William I., Sac City
 Evers, Alvin E., Pella
 Eversmeyer, Benjamin E., Muscatine

Faber, Luke, Dubuque
 Fagen, Rodney P., Des Moines
 Fails, Charles S., Adel
 Fallows, Howard D., Mason City (L.M.)
 Farlow, Charles T., Farnhamville
 Farnsworth, Harold E., Storm Lake
 Farnum, Earl P., Sibley (L.M.)
 Faust, John H., Manson
 Fee, Charles H., Denison
 Fee, Knight E., Toledo
 Feightner, Robert L., Fort Madison
 Fellows, Joseph G., Ames
 Felter, Allan G., Van Meter
 Fenton, Charles D., Bloomfield
 Fenton, Robert L., Centerville
 Ferguson, John W., Newton
 Ferlic, Rudolph J., Carroll
 Feuling, John C., Des Moines
 Field, Charles A., Cresco
 Field, George A., Des Moines (L.M.)
 Field, Grace E. W., Sacramento, Calif.
 Fields, Robert B., LaPorte City
 Fieseler, Walter R., Fort Dodge
 Fieselmann, George F., Spencer
 Files, Edward H., Cedar Rapids
 Fillenwarth, Floyd H., Charles City
 Finch, George H., Des Moines
 Findley, William J. K., Storm Lake (L.M.)

Fisch, Roman J., LeMars
 Fishman, Harlow J., Des Moines
 Fisk, Charlotte, Des Moines
 Fitch, Robert E., Des Moines
 Fitzgerald, Joseph D., Sloan
 Fitzpatrick, Dennis F., Iowa City
 Flancher, Leon H., Des Moines
 Flater, Norman C., Floyd
 Fleischman, Abraham G., Des Moines
 Fleming, Edward F., Rockwell
 Flickinger, Roger R., Mason City
 Flocks, Rubin H., Iowa City
 Floersch, Eugene B., Council Bluffs
 Floyd, Mark L., Iowa City
 Flynn, Charles H., Clarinda
 Flynn, James R., Cedar Rapids
 Flynn, Robert E., Des Moines
 Foley, Fred C., Newell
 Foley, Walter E., Davenport
 Forbes, Stephen A., Iowa City
 Fordyce, Frank W., Des Moines
 Foss, Robert H., Clinton
 Foster, Jess W., Ankeny
 Foster, Morgan J., Cedar Rapids
 Foster, Samuel T., Adel
 Foster, Warren H., Clinton
 Foster, Wayne J., Cedar Rapids
 Foulk, Frank E., Des Moines
 Fourt, Arthur S., Melbourne
 Fowler, Charles C., Lovilia
 Fowler, Willis M., Iowa City
 Fox, Charles L., Pharr, Tex. (L.M.)
 Fox, Ray A., Charles City
 Franchere, Chetwynd M., Mason City
 Frank, Louis J., Sioux City
 Frank, Owen L., Maquoketa
 Franklin, George W., Jefferson (L.M.)
 Franklin, Murray, Iowa City
 Frasco, Peter P., Ruthven
 Fraser, James B., Des Moines
 Fraser, John H., Monticello
 Frech, Raymond F., Newton
 Frederickson, Adolph R., Lansing
 Frelich, Clarence N., Waucoma
 French, Royal F., Marshalltown
 French, Valiant D., Carson
 Frenkel, Hans S., Clarinda
 Frey, Harry E., Grinnell
 Friedman, Barry, Iowa City
 Frink, Lyle F., Spencer
 Fritch, Arthur F., Decorah
 Fritz, Lafe H., Dubuque (L.M.)
 Fry, Gerald A., Vinton
 Fuerste, Frederick, Dubuque
 Fullerton, Oscar L., Redding (L.M.)
 Fullgrabe, Emil A., Sioux City

Gaard, Rasmus R., Radcliffe
 Galinsky, Leon J., Des Moines
 Gallagher, John P., Oelwein
 Galloway, Milton B., Webster City (L.M.)
 *Galman, James J., Sheldon (L.M.)
 Galvin, Robert J., Oelwein
 Gamble, Robert A., Madrid
 Gamet, Elmo E., Lamoni
 Ganoe, James O., Ord
 Gantz, Albert J., Greenfield

Ganzhorn, Harold L., Mapleton
 Gardner, Harold O., Waterloo
 Gardner, John R., Lisbon (L.M.)
 Gardner, Paul E., New Hampton (L.M.)
 Garland, Donald J., Cedar Rapids
 Garland, John C., Marshalltown
 Garred, John L., Whiting
 Garside, Arthur A., Davenport
 Garvy, Andrew C., Iowa City
 Gauger, John W., Early
 Gaukel, Leo A., Onawa
 Gearhart, George W., Springville
 Gearhart, Merriam, Bethany, Mo.
 Gee, Kenneth, Shenandoah
 Geeseka, Otto A., Mount Pleasant (L.M.)
 Gelfand, Arthur B., Sioux City
 Gelfand, Ben B., Sioux City
 Gelfand, Della G., Sioux City
 George, Everett M., Des Moines
 George, Louis A., Remsen
 Gerard, Russell S., II, Waterloo
 Gerken, James F., Waterloo
 Gernsey, Merritt N., Waverly (L.M.)
 Gerstman, Herbert, Marion
 Getty, Everett B., Primghar
 Gibbon, William H., Sioux City
 Gibbs, George M., Burlington
 Gibson, Chelsea D., Sac City
 Gibson, Douglas N., Des Moines
 Gibson, Paul E., Des Moines
 Gibson, Preston E., Davenport
 Giegerich, Walter F., Atlantic
 Giffin, John S., Cedar Falls
 Giles, Francis E., Cresco
 Giles, George C., Oakland (L.M.)
 Gilfillan, Clarence D. N., Bloomfield
 Gilfillan, Earl E., Bloomfield
 Gilfillan, George W., Bloomfield
 Gilfillan, Homer J., Bloomfield (L.M.)
 Gilfillan, Homer J., Jr., Bloomfield
 Gillett, Francis A., Oskaloosa
 Gillies, Carl L., Iowa City
 Gillmor, Benjamin F., Red Oak (L.M.)
 Gingles, Earl E., Onawa
 Gittins, Thomas R., Sioux City
 Gittler, Ludwig, Fairfield
 Givens, Hezekiah F., West Bend
 Gladstone, William S., Jr., Iowa Falls
 Glascock, Thomas J., Hawarden
 Glesne, Orvin G., Iowa City
 Glesne, Otto N., Fort Dodge
 Glomset, Daniel A., Des Moines
 Glomset, Daniel J., Des Moines
 Glotfelty, James S., St. Louis, Mo.
 Goad, Robley R., Muscatine
 Goddard, Chester R., Guttenberg
 Goebel, Clarence J., Sioux City
 Goen, Edwin J., Charles City
 Goenne, William C., Davenport
 Goggin, John G., Ossian
 Goldberg, Louis, Des Moines
 Goltry, Charles F., Russell (L.M.)
 Goodenow, Sidney B., Colo
 Goodman, Lawrence O., Marshalltown
 Gordon, Arnold M., Des Moines
 Gordon, Jack D., Iowa City
 Gorrell, Ralph L., Clarion
 Gottlieb, Jacques S., Iowa City
 Gottsch, Edwin J., Shenandoah
 Gould, Aubrey V., Jr., Wilton Junction
 Gould, George R., Conrad (L.M.)
 Gould, Isaac L., Des Moines
 Gower, Walter E., Fort Dodge
 ★Graber, Harold E., Washington, D. C.
 Graening, Charles H., Waverly (L.M.)
 Graham, James W., Sioux City
 Gran, Albert G., Storm Lake
 Grandinetti, Arthur F., Oelwein
 Grant, John G., Ames
 Grau, Amandus H., Denison
 Graves, Charles C., Jr., Des Moines
 Graves, Max D., Pittsburgh, Pa.
 Gray, Charles W., Oakdale
 Gray, Henry A., Keokuk
 Gray, John F., Melcher
 Gray, Ralph E., Eldora
 Greenblatt, Jerald, Cedar Rapids
 Greenhill, Solomon, Des Moines
 Greenleaf, John S., Iowa City
 Greenlee, Max R., Boulder, Colo.
 Greteman, Theodore J., Dubuque
 Griffin, Charles C., Chicago, Ill.
 Griffin, Clark C., Jr., Vinton (L.M.)
 Griffin, Frank L., Baldwin
 Griffin, John M., Des Moines (L.M.)
 Griffin, Robert E., Sheldon
 Griffin, Sarah M. F., Manson
 Griffith, William O., Council Bluffs
 Groben, Elmer S., Columbus Junction
 Grossman, Milton D., Sioux City
 Grossman, Raymond S., Marshalltown
 Grossmann, Edward B., Orange City
 Grothaus, Dell L., Delta

Grubb, Merrill W., Galva
 Guessford, Howard H., George
 Gunn, Ross E., Boone
 Gurau, Henry H., Des Moines
 Guteh, Roy C., Chariton
 Guteh, Thomas E., Albia

Hagen, Edward F., Decorah
 Haggard, David K., Hawarden
 Haines, Diedrich J., Des Moines
 Haisch, Lilly K., Dubuque
 Hale, Albert E., Mason City
 Hall, Bonnybel A., Maynard
 Hall, Cluley C., Maynard
 Hall, Forest F., Webster City
 Halloran, William H., Audubon
 Halpin, Lawrence J., Cedar Rapids
 *Hamilton, Benjamin C., Sr., Jefferson (L.M.)
 Hamilton, Benjamin C., Jr., Jefferson
 Hamilton, Cecil V., Garner
 Hamilton, Harriett S., Council Bluffs
 Hamilton, Henry E., Iowa City
 Hamilton, Henry H., Cedar Rapids
 Hammer, Raymond W., Sioux City
 Hamstreet, Wilbur F., Titonka
 Hanchett, McMillen, Council Bluffs
 Hands, Sidney G., Davenport
 Hansell, William W., Des Moines
 Hansen, Fred A., Red Oak
 Hansen, Hans, Logan
 Hansen, Niels M., Des Moines
 Hansen, Robert R., Marshalltown
 Hansen, Russell R., Storm Lake
 Hanson, Carl A., Waterloo
 Hanson, Laurence C., Jefferson
 Hardin, John F., Bedford
 Hardin, Robert C., Iowa City
 Hardwig, Oswald C., Waverly
 Harken, Conred R., Osceola
 Harkness, Gordon F., Davenport
 Harman, Clarence, Emerson
 Harman, Dean W., Greenwood
 Harms, George E., Norway
 Harnagel, Edward J., Des Moines
 Harpess, William N., Iowa City
 Harp, John F., Newton (L.M.)
 Harper, George E., Fort Madison
 Harper, Harry D., Fort Madison
 Harper, William H., Keokuk
 Harrington, Arlan F., Cedar Rapids
 Harrington, Raymond J., Sioux City
 Harris, Clinton E., Grinnell
 Harris, D. Dale, Marshalltown
 Harris, Grove W., Marshalltown
 Harris, Herbert H., Sioux City
 Harris, Jack T., Luverne
 Harris, Ray R., Dubuque
 Harris, Robert H., Broadview, Ill.
 Hartley, Byron D., Mount Pleasant
 Hartman, Frank T., Waterloo (L.M.)
 Hartman, Howard J., Waterloo
 Hartsaw, John E., Sigourney
 Hartung, Walter, Davenport
 Harvey, Glen W., Cedar Rapids
 Harwood, Arthur M., Sigourney
 Hastings, John C., Elma
 Havlik, Aloysius J., Tama
 *Hayek, John M., Des Moines
 Hayes, William P., Cedar Rapids
 Hayne, Robert A., Iowa City
 Hayne, Willard W., Des Moines
 Hazlet, Kenneth K., Dubuque
 Heady, Conda C. C., Bloomfield (L.M.)
 Heald, Clarence L., Sigourney
 Healy, Maurice A., Boone
 Heathman, Frank E., Pocahontas (L.M.)
 Hecker, John T., Cedar Rapids
 Heeren, Ralph H., Des Moines
 Heetland, Louis H., Sibley (L.M.)
 Heffernan, Chauncey E., Sioux City
 Hegg, Lester R., Rock Valley
 Heilmann, Elwood H., Ida Grove
 Heilmann, Verne R., Sioux City
 Heinmiller, E. Clifford, Fort Madison
 Heise, Carl A., Jr., Jewell
 Heise, Harris R., Marshalltown
 Heitzman, Paul O., Cedar Rapids
 Heles, John B., Dubuque
 Henderson, Lauren J., Cedar Falls
 Henderson, Walker B., Oelwein
 Hendricks, Alvin H., Sioux City
 Hendricks, Atlee B., Iowa City
 Henely, Edmund, Nora Springs
 Henkin, John H., Sioux City
 Hennes, Raphael J., Oxford
 Hennessey, John M., Manilla
 Hennessey, Felix A., Calmar
 Hennessey, J. Donald, Council Bluffs
 Henningsen, Artemus B., Clinton
 Henry, Clyde A., Farson (L.M.)
 Henry, Hiram B., Des Moines

- Henslin, Merrill E., Cresco
 Henstorf, Harold R., Shenandoah
 Herman, John C., Boone
 Hermesen, Paul J., Bronson
 Herry, Peter M., Prairie City
 Herrick, Thomas G., Gilmore City
 Herrick, Walter E., Ottumwa
 Herrmann, Christian H., Jr., Amana
 Hersch, Thomas F., Cedar Rapids
 Hersey, Nelson L., Independence
 Hess, Ardo M., West Union
 Hess, John, Jr., Des Moines
 Hesselschwerdt, Donald W., Iowa City
 Hesser, Frederick H., Iowa City
 Heusinkveld, Henry J., Clinton
 Hickenlooper, Carl B., Winterset
 Hickerson, Luther C., Brooklyn
 Hickey, Robert H., Iowa City
 Hickman, Charles S., Centerville
 Hicks, Murwyn L., Dubuque
 Hicks, Wayland K., Sioux City
 Hight, William B., Des Moines (L.M.)
 Hildebrand, Howard H., Ames
 Hill, Christine E., Council Bluffs
 Hill, Don E., Clinton
 Hill, James C., Newton
 Hill, James W., Mount Ayr
 Hill, Julia Ford, Des Moines
 Hill, Lee F., Des Moines
 Hill, Richard W., Lake Mills
 Hills, Henry M., Lamoni (L.M.)
 Hills, Robert A., Russell
 Hobart, Francis W., Lake City
 Hoeven, Edward B., Ottumwa
 Hoffman, Paul M., Tipton
 Hoffman, Robert W., Des Moines
 Hoffmann, Alfred A., Waterloo
 Hoffmann, William P., Davenport
 Hollander, Werner M., Davenport
 Hollis, Edward L., Marengo
 Holman, Henry D., Mason City
 Holtey, Joseph W., Ossian
 Hombach, Walter P., Council Bluffs
 Hombach, William P., Council Bluffs (L.M.)
 Hommel, Placido R. V., Elkader
 Honke, Edward M., Sioux City
 Hooper, Lester E., Indianola
 Hopkins, David H., Glidden
 Hornaday, William R., Des Moines
 Horsford, Horace F., Burlington
 Hoskins, James H., Des Moines
 Hospodarsky, Leonard J., Des Moines
 Hotz, Edward J., Strawberry Point
 Houghton, Earl J., Bettendorf
 Houlahan, Jay E., Mason City
 Houlihan, Francis W., Ackley
 Houser, Blanche W., Cedar Rapids
 Houser, Cass T., Cedar Rapids
 Housholder, Harold A., Winthrop
 Houston, Bush, Nevada
 Howar, Bruce F., Webster City
 Howard, Lloyd G., Council Bluffs
 Howe, Gerald W., Marengo
 Howell, Elias B., Ottumwa
 Hruska, Glen J., Belmond
 Huber, Robert A., Charter Oak, Iowa
 Hudek, Joseph W., Garnaville
 Hudson, Jessie B., Hampton
 Huffman, William C., Iowa City
 Hughes, Parker K., Des Moines
 Hughes, Robert O., Ottumwa
 Hull, Henry C., Jr., Washington (L.M.)
 Hulse, Roy A., Burlington
 Hungerford, Louis N., Fairfield
 Hunt, Van W., Mason City
 Hunting, Ralph D., Cedar Rapids
 Huntley, Charles C., Avoca
 Hurevitz, Hyman M., Davenport
 Huston, Daniel F., Burlington
 Huston, Herbert M., Ruthven (L.M.)
 Huston, Marshall D., Cedar Falls
 Huston, Paul E., Iowa City
 Hyatt, Charles N., Albia (L.M.)
 Hyatt, Charles N., Jr., Humeston
 Hyndman, Olan R., Davenport
 Ihle, Charles W., Cleghorn
 Ingham, Paul G., Mapleton
 Ingraham, David R., Sewal
 Irish, Thomas J., Forest City
 Irving, Noble W., Mission, Kan.
 Isenberg, Bertice A., Lohrville
 Isham, Robert B., Osage
 Jackson, James M., Jefferson
 Jackson, James S., Mount Pleasant
 Jackson, Robert L., Iowa City
 Jacobs, Carl A., Sioux City
 Jacoby, James A., Burlington
 Jacques, Lewis H., Lone Tree
 Jaenicke, Kurt, Clinton
 James, Audra D., Des Moines
 James, David W., Des Moines
 James, Lora D., Fairfield
 James, Peter E., Elk Horn
 Jameson, Robert E., Davenport
 Janse, Phillip V., Algona
 January, Lewis E., Iowa City
 Jardine, George A., New Virginia
 Jardine, George H., Creston
 Jarvis, Fred J., Oskaloosa
 Jarvis, Harry D., Chariton
 Jaskunas, Stanley R., Bloomfield
 Jeans, Philip C., Iowa City
 Jeffries, Milo E., Marshalltown
 Jeffries, Roy R., Waukon
 Jenkins, George A., Albia
 Jenkins, George D., Burlington
 Jenkins, Hanley F., Ogden
 Jenkinson, Harry R., Iowa City
 Jenks, Alonzo L., Jr., Des Moines
 Jensen, Arthur E., Humboldt
 Jensen, LeRoy E., Audubon
 Jerdee, Ingebrecht C., Clermont
 Jessup, Parke M., Muscatine
 Jirsa, Harold O., Cedar Rapids
 Johann, Albert E., Des Moines
 Johnson, Aaron Q., Sioux City
 Johnson, Albert P., Sigourney (L.M.)
 Johnson, Aldis A., Council Bluffs
 Johnson, Chester H., Cherokee
 Johnson, Clarence A., Coon Rapids
 Johnson, George M., Marshalltown
 Johnson, G. Raymond, Ottumwa
 Johnson, Harvey A., Atlantic
 Johnson, James A., Pittsburgh, Pa.
 Johnson, J. A. William, Marshalltown
 Johnson, Jonathan, Alden
 Johnson, Norman M., Clarinda
 Johnson, Robert J., Iowa Falls
 Johnson, Richard M., Denison
 Johnson, Robert W., Clinton
 Johnson, Wendell A., Emmetsburg
 Johnson, William A., Iowa Falls
 Johnston, C. Harlan, Des Moines
 Johnston, Florence D., Cedar Rapids
 Johnston, George B., Estherville
 Johnston, Harry L., Ames
 Johnston, Helen, Des Moines
 Johnston, Howard H., Hampton
 Johnston, Kenneth L., Oskaloosa
 Johnston, Wayne A., Dubuque
 Johnstone, Alexander A., Keokuk
 Jones, Cecil C., Des Moines
 Jones, Charles L., Gilmore City
 Jones, Clare C., Spencer
 Jones, Harold W., Sioux City
 Jones, Harry J., Cedar Rapids
 Jones, Louis H., Wall Lake (L.M.)
 Jones, William S., Jr., Iowa City
 Jongewaard, Albert J., Jefferson
 Jongewaard, Jean, Jefferson
 Jordan, John W., Maquoketa
 Jowett, John R., Clinton
 Joynt, Albert J., Waterloo
 Joynt, Martin J., LeMars
 Joynt, Michael F., Marcus
 Judiesch, Kenneth J., Iowa City
 Junger, Emil C., Soldier
 Kaack, Harry F., Clinton
 Kaack, Harry F., Jr., Clinton
 Kadel, Merl A., Laurens
 Kahler, Hugo V., Reinbeck
 Kalar, Sara B., Ames
 Kane, Thomas E., Boone
 Kanealy, John F., Cedar Rapids
 Kapke, Franklin W., Mason City
 Kaplan, David D., Sioux City
 Kas, Thomas D., Sutherland
 Kassmeyer, John C., Dubuque
 Kast, Donald H., Des Moines
 Katherman, Charles A., Sioux City
 Katzmman, Frederick S., Des Moines
 Kauffman, William A., Marshalltown
 Kaufman, Ernest L., Fort Atkinson
 ★Keane, Kenneth M., Elk Port, S. D.
 Keech, Roy K., Cedar Rapids
 Keen, Burlin E., Des Moines
 Keeney, George H., Mallard
 Kettell, William C., Jr., Iowa City
 Kehoe, Joseph L., Davenport
 Keil, Philip G., Des Moines
 Keith, Charles W., Strawberry Point
 Keith, John J., Marion
 Kelberg, Melvin R., Sioux City
 Keleher, Michael F., Iowa City
 Kelley, Edmund J., Des Moines
 Kelley, Lawrence E., Des Moines
 Kelly, Dennis H., Des Moines
 Kelly, John F., Sioux City
 Kelly, Joseph I., Burlington (L.M.)
 Kenefick, John N., Algona
 Kennedy, Elizabeth S., Oelwein
 Kennedy, William C., Somers
 Keohen, Gerald F., Dubuque
 Kern, Lester C., Waverly (L.M.)
 Kerr, H. Dabney, Iowa City
 Kerr, Johnson H., Akron
 Kerr, W. Hawley, Hamburg
 Kerr, William, Randolph
 Kershner, Frank O., Clinton
 Kersten, Ernest M., Fort Dodge
 Kersten, Herbert, Iowa City
 Kerwick, Joseph M., New Hampton
 Kessel, James E., Des Moines
 Kestel, John L., Waterloo
 Ketner, Lester E., Oelwein
 Kettelkamp, Enoch G., Monona
 Keyser, Earl L., Marshalltown
 Keyser, Ralph E., Marshalltown
 Kieck, Ernest G., Cedar Rapids
 Kiesau, Frederick W., Postville
 Kiesau, Milton F., Postville
 Kiesling, Harry F., Lehigh
 Kilgore, Benjamin F., Des Moines
 Kimball, John E., West Liberty
 Kimberly, Lester W., Davenport
 King, David H., Batavia (L.M.)
 King, Dean H., Spencer
 King, Harold N., Hampton, Va.
 King, Oran W., Des Moines
 King, Ray E., Des Moines
 King, Ross C., Clinton
 Kingsbury, Charles L., Keokuk
 Kirch, Walter A., Des Moines
 Kirkegaard, Smith C., Estherville
 Kirkendall, Walter M., Iowa City
 Kitson, Walter W., Atlantic
 Klein, John L., Jr., Muscatine
 Kleinberg, Henry E., Des Moines
 Kline, Samuel, Sioux City
 Klocksien, Harold L., Des Moines
 Klocksien, Roy G., Rockwell City
 Klok, George J., Council Bluffs
 Kluever, Herman C., Fort Dodge
 Knapp, Brace I., Des Moines
 Knight, Benjamin L., Cedar Rapids
 Knight, Edson C., Marshalltown
 Knight, Russell A., Rockford
 Knipe, James B., Armstrong
 Knipfer, Robert L., Jesup
 Knoll, Albert H., San Diego, Calif.
 Knosp, Norman C., Belle Plaine
 Knott, Peirce D., Sioux City
 Knouf, Clare E., Lake City
 Knowles, Fred L., Fort Dodge
 Knudsen, Hubert K., Clinton
 Koch, George W., Anaheim, Calif. (L.M.)
 Koelling, Lloyd H., Newton
 Koester, John F., Des Moines
 Koontz, Lyle W., Vinton
 Korfmacher, Edwin S., Grinnell
 Kornder, Louis H., Davenport
 Korns, Horace M., Dubuque
 Kos, Clair M., Iowa City
 Koser, Donald C., Cherokee
 Krakauer, Adolf, Massillon, Ohio
 Krause, Charles S., Cedar Rapids
 Krejsa, Oldrich, Cedar Rapids
 Krenning, Katherine S., Los Angeles, Calif.
 Krepelka, George E., Osage
 Krettek, John, Council Bluffs
 Kriebs, Frank J., Elkport (L.M.)
 Kriebbaum, Horace T., Davenport
 Krigsten, Joe M., Sioux City
 Krigsten, William M., Sioux City
 Kruckenberg, William G., Cedar Rapids
 Kruml, Joseph G., Council Bluffs
 Kuhl, Augustus B., Davenport
 Kuhl, Augustus B., Jr., Davenport
 Kuhn, Leo C., Decorah
 ★Kuitert, John H., San Francisco, Calif.
 Kuler, Leo H., Carroll
 Kulp, Raymond R., Davenport
 Kurtz, Cecilia M., Cedar Rapids
 Kyle, William S., Washington
 Labagh, Nicholas W., Mystic
 LaDage, Leo H., Palm Springs, Calif.
 Ladd, Frederick G., Cedar Rapids (L.M.)
 LaForce, Edward F., Burlington (L.M.)
 Lagen, Mansfield S., Iowa City
 Laidley, Wallace G., Orden
 Lamb, Frederick H., Davenport
 Lamb, Harry H., Davenport
 Lampe, Elmer L., Bellevue
 Lande, Jacob N., Sioux City
 Landis, Sylvanus N., Des Moines
 Langford, William R., Cedar Rapids
 Langworthy, Henry G., Dubuque
 Lannon, James W., Mason City
 Larimer, Robert N., Sioux City
 Larimore, Ogilvie W., Des Moines
 Larsen, Elmer A., Centerville
 Larsen, Frank S., Fort Dodge

- Larsen, Harold T., Fort Dodge
 Larson, Andrew G., Dickens
 Larson, Lester E., Decorah
 Larson, Marvin O., Hawarden
 Latchem, Charles W., Des Moines
 LaTona, Joseph H., Council Bluffs
 Laughlin, Ralph M., Cedar Rapids
 Launder, Frank T., San Diego, Calif. (L.M.)
 Lavender, John G., George
 Lawlor, Jeremiah F., Cherokee
 Lawrence, Joseph W., Dubuque
 Layton, Jack M., Iowa City
 Lease, Nimrod J., Crawfordsville (L.M.)
 Lederman, Joseph, Oskaloosa
 Lee, Gisle M., Thompson (L.M.)
 Lee, Otis S., Jr., Iowa City
 Lee, Robert W., Algona
 Lee, Wayne R., Burlington
 Leechey, Paul J., Independence
 Leffert, Frank B., Centerville
 Lehman, Emery W., Des Moines
 Lehr, Sylvan M., Cedar Rapids
 Lebowitz, Martin, Des Moines
 Leighton, Lewis L., Fort Dodge
 Leinbach, Samuel P., Belmont
 Leinfelder, Placidus J., Iowa City
 Leiter, Herbert C., Sioux City
 Leith, George G., Wilton Junction
 Lekwa, Alfred H., Story City
 Lemon, Kenneth M., Oskaloosa
 Lenaghan, Robert T., Clinton
 Lenzmeier, Albert J., Davenport
 Leonard, Earl R., Boise, Idaho
 Leonard, Frederick S., Dubuque
 Lessenger, Ernest J., New London
 Levin, Harry M., Waterloo
 Lewis, Faye C., Webster City
 Lewis, William B., Webster City
 Lichter, Theodore W., Edgewood
 Lierle, Dean M., Iowa City
 Lierman, Clifford E., Lake View
 Liken, John A., Creston
 Limburg, J. Irwin, Jefferson
 Limburg, John L., Jr., Jefferson
 Linbert, Edwin M., Council Bluffs
 Lincoln, Simon E., Des Moines
 Lindley, Ellsworth L., Cedar Rapids
 Lindholm, Hugo, Armstrong
 Lindsay, Vernard T., Glidden
 Liska, Edward J., Ute
 Lister, Kenneth E., Ottumwa
 Little, Luther W., Atkins
 Litwiller, Raymond W., Ames
 Lloyd, John M., Washington
 Locher, Robert C., Cedar Rapids
 Lockhart, Harold A., Cedar Rapids
 Lodwick, Gwilym S., Jr., Iowa City
 Loeck, John F., Independence
 Loes, Anthony M., Dubuque
 Lohman, Frederick H., Waterloo
 Lohmann, Carl J., Burlington
 Lohr, Phillips E., Churdan
 Loizeaux, Charles E., Dubuque
 Long, Draper L., Mason City
 Longworth, Wallace H., Boone
 Loomis, Frederic G., Waterloo
 Loosbrock, John F., Perry
 Loose, David N., Maquoketa (L.M.)
 Lorfeld, Gerhard W., Davenport
 Losh, Clifford W., Des Moines
 Losh, Clifford W., Jr., Des Moines
 Lott, Robert H., Carroll (L.M.)
 Love, Francis L., Iowa City (L.M.)
 Lovejoy, E. Parish, Des Moines
 Lovelady, Ralph, Sidney
 Lovett, Charles E., Lineville
 Lovett, Earl D., Vinton
 Loving, Luther W., Estherville
 Lowry, Charles F., Council Bluffs
 Lueck, Arthur G., Des Moines
 Luehrsmann, Bernard C., Dyersville
 Luehrsmann, Bernard H., Dyersville
 Lugnbuhl, Christian B., Des Moines
 Luke, Edward, Coin
 Lundvick, Arthur W., Gowrie
 Luse, Ralph F., Clinton
 Lutton, John D., Sioux City
 Lyman, Frank L., Jr., Fort Madison
 Lynn, Arthur R., Marshalltown
 Lynn, Clarence E., Dubuque
 McAllister, James, Odebolt
 McBride, James T., Des Moines (L.M.)
 McBride, Robert H., Sioux City
 McCaffrey, Eugene H., Des Moines
 McCall, John H., Allerton
 McCann, John F., Marshalltown
 McCarl, J. Jay, Sac City
 McCarthy, Frank D., Sioux City
 McCartney, William H., Des Moines
 McClean, Earl D., Des Moines
 McClintock, John T., Iowa City (L.M.)
 McClure, Ernest C., Bussey (L.M.)
 McClure, Gail A., Ames
 McClurg, Frank H., Fairfield
 McConkie, Edwin B., Cedar Rapids
 McConkie, Willis L., Carroll
 McCoy, Harold J., Des Moines
 McCrae, Eppie S., Eddyville (L.M.)
 McCreedy, Murry L., Washington
 *McCreedy, John W., Whittemore (L.M.)
 McCreight, George C., Des Moines
 McCuiston, Harry M., Sioux City
 McCullough, John H., Waukon
 McDonald, Don J., Cedar Rapids
 McDonald, James E., Mason City (L.M.)
 McDowall, Gilbert T., Gladbrook
 McDowell, William O., Grundy Center
 McFadden, F. Ross, Davenport
 McFarland, Guy E., Ames
 McFarland, Guy E., Jr., Ames
 McFarland, Julian E., Ames
 McGahey, William B., Stratford
 McGill, Arthur A., Danbury
 McGilvra, Arthur L., Sioux Center
 McGowan, Edwin C., Cherokee
 McGrane, Merle J., New Hampton
 McGready, Joseph H., Independence (L.M.)
 McGuire, Kenneth L., Keota
 McGuire, Roy A., Fairfield
 McHugh, Charles P., Sioux City
 McIntyre, Caryl C., Waterloo
 McKay, Richard V., Jr., Dubuque
 McKean, Frank F., Allison
 McKirahan, Josiah R., Wayland
 McKitterick, John C., Burlington
 McLaughlin, Charles W., Washington (L.M.)
 McMahon, Thomas, Garner (L.M.)
 McMeans, Thomas W., Davenport
 McMillen, Arch S., Fort Dodge
 McMullen, Jane, Des Moines
 McMullen, Thomas, Des Moines
 McMurray, Edward A., Newton
 McNamara, Robert J., Kansas City, Mo.
 McNamee, Jesse H., Des Moines
 McPherrin, Henry L., Des Moines
 McQuiston, J. Stuart, Cedar Rapids
 McTaggart, William B., Fort Dodge
 McVay, Melvin J., Lake City
 Mackin, M. Charles, Des Moines (L.M.)
 MacLeod, Hugh G., Greene
 MacNaughton, Luther D., Eagle Grove
 Macrae, James G., Creston
 Magaret, Ernest C., Glenwood
 Magdsick, Carl, Des Moines
 Magee, Emery E., Waterloo
 Mahin, Frank M., Washington (L.M.)
 Mahoney, James D., Council Bluffs
 Mailliard, Robert E., Storm Lake
 Maland, Donald O., Cresco
 Maloy, Wayland H., Shenandoah
 Mantz, Russell L., Cedar Rapids
 Maplethorpe, Charles W., Toledo
 Maplethorpe, Charles W., Jr., Toledo
 Marble, Edwin J., Marshalltown
 Marble, Ira A., Sheffield
 Marble, Pearl L., Liscomb (L.M.)
 Marble, Willard P., Marshalltown
 Marek, Joseph E., Mason City (L.M.)
 Maresh, George, Denver, Colo.
 Margulies, Harold, Des Moines
 Marinos, Harry G., Mason City
 Maris, Cornelius, Sanborn
 Maris, Gerrit, Hull
 Maris, William, Sioux Center
 Mark, Edward M., Clarksville
 Marker, John L., Davenport
 Marquis, Fred M., Waterloo
 Marquis, George S., Des Moines
 Marr, James, Glenwood
 Marsh, Frederick E., Council Bluffs
 Martin, James W., Holstein
 Martin, John F., Latimer
 Martin, Josef R., Carroll
 Martin, Lee R., Council Bluffs
 Martin, Loran M., Fort Dodge
 Martin, Ronald F., Sioux City
 Martin, Sidney D., Carroll (L.M.)
 Mason, Robert P., Des Moines
 Mason, Stella M., Mason City (L.M.)
 Masson, Hervey F., Washington
 Mast, Truman M., Washington
 Mater, Dwight A., Knoxville
 Mater, Roy V., Knoxville
 Matheson, John H., Des Moines
 Mathias, John P., Mediapolis (L.M.)
 Mathiasen, Aileen E., Council Bluffs
 Mathiasen, Emmett B., Council Bluffs
 Mathiasen, Henning W., Council Bluffs
 Mathiasen, John W., Council Bluffs
 Matthews, Robert J., Clarinda
 Matthey, Carl H., Davenport
 Matthey, Walter A., Davenport
 Mattice, Lloyd H., Sheldon
 Mattice, Roger J., Sioux Rapids
 Mauritz, Emory L., Des Moines
 Maxwell, Charles T., Sioux City
 Maxwell, John, What Cheer
 May, George A., Des Moines
 Maynard, James H., Shelby
 Mead, Frank N., Cedar Falls (L.M.)
 Meany, John F., Rockwell
 Meffert, Clyde B., Cedar Rapids
 Meggers, Edward C., McGregor
 Megorden, William H., Mount Pleasant
 Mehler, Frank R., New London
 Mellen, Robert G., Clinton
 Meredith, Loren K., Des Moines
 Merrillat, Herbert C., Des Moines
 Merkel, Arthur E., Des Moines
 Merkel, Byron M., Des Moines
 Merrill, Charles H., Oskaloosa
 Merritt, Arthur M., Des Moines
 Merselis, Harold K., Audubon
 Mershon, Clinton E., Adel (L.M.)
 Meyer, Alfred K., Old Hickory, Tenn.
 Meyer, Valentine J., Glenwood
 Meyers, Frank W., Dubuque
 Meyers, Henry A., Davenport
 Mieras, Marion D., Los Angeles, Calif.
 Mikelson, Clarence J., Waterloo
 Miller, Brownlow B., Tabor
 Miller, Chester I., Iowa City
 Miller, Donald F., Williamsburg
 Miller, Enos D., Wellman
 Miller, Howard L., Cedar Rapids
 Miller, Jay R., Wellman
 Miller, Lawrence A., North English
 Miller, Temple M., Muscatine
 Miller, Wilbur R., Iowa City
 Miller, William B., Centerville
 Millice, Glenn B., Battle Creek
 Millikan, Clark H., Iowa City
 Mills, Frank W., Ottumwa (L.M.)
 Miltner, Leo J., Davenport
 Minassian, Harootune A., Des Moines (L.M.)
 Minassian, Thaddeus A., Des Moines
 *Miner, James B., Sr., Charles City (L.M.)
 Miner, James B., Jr., Charles City
 Minkel, Roger M., Fort Dodge
 Missman, Walter F., Klemme
 Mitchell, Claire H., Indianola
 Mitchell, John R., Des Moines
 Moen, Stanley T., Cedar Rapids
 Moerke, Robert F., Burlington
 Moershel, Henry G., Homestead
 Moershel, William J., Cedar Rapids
 Moffatt, Thomas W., St. Louis, Mo.
 Mol, Henry L., Grundy Center
 Montgomery, Albert E., Battle Creek, Mich.
 Montgomery, Guy E., Washington
 Montgomery, J. Lesley, Des Moines
 Montgomery, Paul W., Iowa City
 Montz, Fred, Lowden
 Moon, Barclay J., Cedar Rapids
 Mooney, James C., Des Moines
 Moore, Edson E., Fort Dodge
 Moore, Gage C., Ottumwa
 Moore, Harold H., Ottumwa
 Moore, Jesse C., Eldon
 Moore, Pauline V., Iowa City
 Moorehead, Harold B., Underwood
 Moran, Thomas A., Melrose
 Mordaunt, Richard H., Nevada
 Morgan, Earl E., Sioux City
 Morgan, Fred B., Clinton
 Morgan, Harold W., Mason City
 Morgan, Paul W., Iowa City
 Morgenthaler, Otis P., Templeton (L.M.)
 Moriarty, John F., Atlantic
 Moriarty, Lauren R., Villisca
 Morris, Zenella E. N., Stockport (L.M.)
 Morrison, Edward D., Fort Dodge
 Morrison, John R., Carroll
 Morrison, John W., Alta
 Morrison, Roland B., Carroll
 Morrison, Wesley J., Cedar Rapids (L.M.)
 Morrissey, George E., Davenport
 Morrissey, William J., Des Moines
 Morse, Charles H., Eagle Grove (L.M.)
 Morton, Elmer E., Manning
 Morton, Mathew T., Estherville
 Mosher, Martin L., Jr., Iowa City
 Mott, William H., Farmington
 Mountain, Elmer B., Des Moines
 Mountain, George E., Des Moines
 Mueller, Emil F., Dyersville
 Mugan, Robert C., Sioux City
 Mullmann, Arnold J., Perry

- Mulsow, Frederick W., Cedar Rapids
 Mumma, Claude S., Santa Monica, Calif.
 Munger, Elbert E., Jr., Spencer
 Murchison, Kenneth, Sidney
 Murphey, Arlo L., Fredericksburg
 Murphy, Cornelius B., Alton
 Murphy, George C., Waterloo
 Murphy, James H., Des Moines
 Murphy, James J., Cedar Rapids
 Murray, Frederick G., Cedar Rapids
 Murray, Jonathan H., Burlington
 Murtaugh, James E., New Hampton
 Myerly, William H., Des Moines
 Myers, Edward M., Woodward
 Myers, Judson W., Postville
 Myers, Kermit W., Sheldon
 Myers, Robert W., Monticello
- Nakashima, Victor K., Des Moines
 Nash, Edwin A., Ottumwa
 Nauman, Ernest C., Waterloo
 Nayfield, Ruth K., Des Moines
 Neal, Emma J., Cedar Rapids
 Nederhiser, Morgan I., Cascade
 Needles, Roscoe M., Atlantic
 Neglia, Fortunato J., Maxwell
 Nelken, Leonard, Clinton
 Nelken, Viola D., Clinton
 Nelson, Arnold L., Des Moines
 Nelson, Carrol C., Red Oak
 Nelson, Frederick L., Ottumwa
 Nelson, Frederick L., Jr., Ottumwa
 Nelson, Leo C., Jefferson
 Nelson, Paul O., Emmetsburg
 Nelson, Robert J., Clinton
 Nemec, Joseph J., Cedar Rapids
 Nemmers, Gerald J., Washington
 Nesler, Alfred B., Dubuque
 Netolicky, Robert Y., Cedar Rapids
 Neufeld, Robert J., Davenport
 Neuzil, William J., Cedar Rapids
 Newland, Don H., Belle Plaine
 Newlove, Frank E., Winddale, N. Y.
 Newman, Cloyce A., Bode
 Newman, Robert W., Iowa City
 Niblock, George F., Derby
 Nicholson, Clyde G., Des Moines
 Nicoll, Charles A., Panora
 Nicoll, David T., Mitchellville (L.M.)
 Nielsen, Arnold T., Ankeny
 Nielsen, Rudolph F., Cedar Falls
 Nielson, Arthur L., Council Bluffs
 Niemann, Theodore V., Bellevue
 Nierling, Paul A., Cresco
 Noble, Nelle S., Des Moines
 Noble, Rusl P., Alta
 Noé, Carl A., Cedar Rapids
 Noé, Charles F., Amana (L.M.)
 Nolan, John C., Corning
 Nomland, Ruben, Iowa City
 Noonan, James J., Marshalltown
 Nord, Donald H., Cambridge
 Nordin, Charles A., Des Moines
 Nordstrom, Joel E., Ames
 Norment, John E., Clinton
 Norris, Lewis D., Des Moines
 North, Frank R., Winfield
 Norton, Alva C., Rockwell City (L.M.)
 Noun, Louis J., Des Moines
 Noun, Maurice H., Des Moines
 Null, Frederick F., Hawarden
 Nyquist, David M., Eldora
 Nysewander, Christian, Des Moines (L.M.)
- Ober, Frank G., Burlington
 O'Brien, Cecil S., Iowa City
 O'Brien, Lyl J., Fort Dodge
 O'Brien, Stephen A., Mason City
 O'Connor, Edwin C., New Hampton
 O'Donnell, Joseph E., Clinton
 O'Donoghue, Arch F., Sioux City
 O'Donoghue, James H., Storm Lake
 Oelrich, Carl D., Sioux Center
 Oesterlin, Ernst J., Mount Pleasant
 Ogel, Herman D., Maurice
 O'Keefe, John E., Waterloo (L.M.)
 O'Keefe, Paul T., Waterloo
 O'Leary, Francis B., Sibley
 Olsen, Martin I., Des Moines
 Olson, Evelyn M., Winterset
 Olson, Ranald E., Milton
 Olson, Russell L., Northwood
 O'Neal, Harold E., Tipton
 Osborn, C. Robert, Dexter
 Osincup, Paul W., Sioux City
 Osten, Burdette H., Northwood
 O'Toole, Laurence C., LeMars
 O'Toole, Roger L., Waterloo
 Otto, Paul C., Fort Dodge
 Owen, William E., St. Ansgar
 Owen, William R., Osage
- Pace, Arthur A., Toledo (L.M.)
 Page, Wesley M., Montezuma
 Pagelsen, Otto H., Iowa Falls
 Pahlhas, Henry M., Dubuque
 Paige, Ralph T., LaPorte City
 Painter, J. Carl, Dubuque
 Palmer, Carson W., Guttenberg
 Palmer, Howard C., Nichols
 Palumbo, Louis T., Des Moines
 Paragas, Modesto R., Creston
 Parish, John R., Grinnell
 Parke, John, Cedar Rapids
 Parker, Edward S., Ida Grove (L.M.)
 Parker, Loran F., Iowa Falls
 Parker, Robert L., Des Moines
 Parks, Claude O., Iowa City
 Parry, Roy E., Scranton
 Parsons, John C., Des Moines
 Paschal, George A., Webster City
 Pascoe, Paul L., Carroll
 Patterson, John N., Burlington (L.M.)
 Patterson, Roy A., Webster City
 Paul, John D., Anamosa
 Paul, Robert D., Anamosa
 Paul, Robert E., West Des Moines
 Paul, William D., Iowa City
 Paulsen, Herbert B., Harris
 Paulus, Edward W., Iowa City
 Paulus, James W., Dubuque
 Payne, Roswell H., Exira
 Pearlman, Leo R., Des Moines
 Pearson, George J., Burlington
 Peart, John C., Davenport
 Pease, Herbert, Alta Vista
 Peasley, Harold R., Des Moines
 Peck, Raymond E., Davenport
 Pedersen, Arthur M., Council Bluffs
 Peggs, Harold J., Des Moines
 Peisen, Conan J., Des Moines
 Pelz, Werner P., Nashua
 Pence, James W., Columbus Junction
 Penly, Don H., Cedar Falls
 Penn, Eugene C., West Des Moines
 Perkins, Franklin C., Hedrick
 Perkins, Rollin M., Davenport
 Perley, Arthur E., Waterloo
 Perman, Harvey H., Forest City
 Perrin, H. Joyce, Des Moines
 Peschau, Waldo E., Cedar Rapids
 Petersen, Emil C., Atlantic
 Petersen, Millard T., Atlantic
 Petersen, Robert E., Iowa City
 Petersen, Vernon W., Clinton
 Peterson, Evan A., Burlington
 Peterson, Frank R., Cedar Rapids
 Peterson, John C., Hartley
 Peterson, Ray W., Clear Lake
 Pfeiffer, Eric P., Des Moines
 Pfeiffer, Ernest, Hartley
 Pfeiffer, Harry E., Cedar Rapids
 Pfohl, Anthony C., Dubuque
 Phelps, Charles R., Ottumwa
 Phelps, Gardner D., Waterloo
 Phelps, Richard E. H., New Sharon
 Phetepace, Willard S., Davenport
 Phifer, Robert L., Davenport
 Philipp, Roy J., Iowa City
 Phillips, Albin B., Clear Lake (L.M.)
 Phillips, Allan B., Des Moines
 Phillips, Clarence P., Muscatine
 Phillips, I. Hildreth, Missouri Valley
 Phillips, Walter B., Montezuma
 Pickard, John C., Dubuque
 Piekenbrock, Frank J., Dubuque
 Piercy, Kenneth C., Ames
 Pierson, Lawrence E., Sioux City
 Pitluck, Harry L., Laurens
 Plankers, Arthur G., Dubuque
 Plass, Everett D., Iowa City
 Peepsel, Frank L., West Point
 Ponseti, Ignacio V., Iowa City
 Poore, Samuel D., Villisca
 Porter, Charles E., Redfield
 Porter, Richard C., Des Moines
 Porter, Robert J., Des Moines
 Porter, S. Dale, Grinnell
 Posner, Edward R., Des Moines (L.M.)
 Posner, Edward R., Jr., Des Moines
 Powell, Adrian R., Elkader
 Powell, Burke, Albia (L.M.)
 Powell, Lester D., Des Moines
 Powell, Robert A., Farragut
 Powell, Velura E., Red Oak (L.M.)
 Powers, George H., Shenandoah
 Powers, Henry R., Emmetsburg
 Powers, Ivan R., Waterloo
 Powers, John L., Estherville
 Preece, Wade O., Waterloo
 Prentice, George L., Bloomfield
 Prescott, Kenneth H., Storm Lake
 Presnell, J. William, Scranton
 Presnell, William H., Charlotte
- Preston, Frederick W., Mason City
 Prettyman, Oscar R., Manson
 Prewitt, Leland H., Ottumwa
 Price, Alfred S., Des Moines
 Priessman, Frank A., Keokuk
 Priestley, Joseph B., Des Moines
 Pringle, Jesse A., Oconomowoc, Wisc. (L.M.)
 Proctor, Rothwell D., Cedar Rapids
 Prouty, James V., Cedar Rapids
 Province, William J., Dubuque
 Ptacek, Joseph L., Webster City
 Pugh, Philip F. H., Sioux City
 Pumphrey, Loira C., Keokuk
 Puntenné, Andrew W., Boone
 Purdy, William O., Des Moines
 Putnam, Chester L., Des Moines
- Quinn, Francis P., Dubuque
 Quirin, Lloyd F., Des Moines
- Radcliffe, Christian E., Hartley
 Rahn, Gordon E., Mount Vernon
 Ralston, Furman P., Knoxville
 Rambo, Cyrus C., Creston
 Rambo, David T., Ottumwa (L.M.)
 Ramsdell, Stuart T., Clarinda
 Randall, John H., Iowa City
 Randall, Rcss G., Waterloo
 Randall, William L., Hampton
 Rankin, Isom A., Iowa City
 Rankin, John R., Keokuk
 Rankin, William, Keokuk
 Ransom, Harry E., Des Moines
 Rater, David L., Ottumwa
 Rathe, Herbert W., Waverly
 Rausch, Gerald R., Sioux City
 Raw, Elmer J., Pierson
 Redmond, James J., Cedar Rapids
 Redmond, Thomas M., Monticello
 Reeck, Leland K., Lytton
 Reed, Andrew I., Estherville
 Reed, Guy P., Davis City (L.M.)
 Reed, Purl E., Council Bluffs
 Reeder, James E., Sioux City
 Reeder, James E., Jr., Sioux City
 Reedholm, Edwin A., Grundy Center
 Reiley, William S., Red Oak (L.M.)
 Reimers, Robert S., Fort Madison
 Reinecke, Edward L., Dubuque (L.M.)
 Reinsch, Frank, Ashton
 Remboit, Ray R., Iowa City
 Renee, William G., Sigourney
 Render, Norman D., Clarinda
 Rendleman, William H., Davenport
 Rendleman, W. Hugh, Davenport
 Reuber, Roy N., Mason City
 Reuling, Frank H., Waterloo
 Reynolds, Albert C., Des Moines
 Rhodes, John M., Pocahontas
 Rice, Floyd W., Des Moines
 Richardson, Leon F., Collins
 Richey, Granville L., Centerville
 Richmond, Arthur C., Fort Madison
 Richmond, Frank R., Fort Madison
 Richmond, Paul C., New Hampton
 Richter, Harold J., Albia
 Ridenour, Joseph E., Waterloo
 Rider, Harmon E., Sioux City
 Riegeiman, Ralph H., Des Moines
 Rienets, John H., Cedar Rapids
 Riess, Stephen, Cedar Rapids
 Riggert, Leonard O., Clinton
 Riggie, Frank P., Cedar Rapids
 Riley, John, Exira (L.M.)
 Rimel, George W., Bedford
 Ringena, Engelke J., Brooklyn
 Rinker, George E., Oto
 Ristine, Leonard P., Mount Pleasant
 Ritter, Eugene F., Centerville
 Rives, Hugh F., Dubuque
 Rizzo, Frank, Sibley
 Robb, James B., Chariton
 Robb, Robert W., Independence
 Roberts, C. Ronald, Dysart
 Roberts, F. LeRoy, Spirit Lake
 Roberts, Francis M., Knoxville
 Roberts, Justus B., Ottumwa
 Robertson, Treadwell A., West Liberty
 Robinson, George L., Waterloo
 Robinson, Robert E., Waverly (L.M.)
 Robinson, Van C., Des Moines
 Rock, John E., Davenport
 Rock, Joseph H., Davenport
 Rockwell, Maryelda, Clinton
 Rodawig, Don F., Spirit Lake
 Roddy, Harold J., Mason City
 Rodemeyer, Frederick H., Sheffield
 Rodgers, Lewis A., Oskaloosa (L.M.)
 Roe, Cullen B., Afton
 Rogers, Claude B., Earlville (L.M.)

- Rohlf, Edward L., Jr., Waterloo
 Rohrbacher, William M., Iowa City
 Rohwer, Roland T., Sioux City
 Rolfs, Floyd O., Parkersburg
 Rolfs, Fred A., Aplington
 Romine, John H., Webster City
 Rominger, Clark R., Waukon
 Rominger, Clark W., Waukon
 Roost, Frederick H., Sioux City
 Rose, Alvin A., Story City
 Rose, Joseph E., Grundy Center
 Rosebrook, Lee E., Ames
 Rosendorff, Charlotte, Bettendorf
 Ross, Arthur J., Perry
 Rost, Glenn S., Lake City
 Rotkow, Maurice J., Des Moines
 Rowat, Harry L., Des Moines
 Rowe, John J., Cedar Falls
 Rowley, Robert D., Burlington
 Rowley, William G., Sioux City
 Royal, Lester A., West Liberty
 Royal, Malcolm A., Des Moines
 Rudersdorf, Howard E., Sioux City
 Ruml, Wentzle, Cedar Rapids (L.M.)
 Rushia, Edwin L., Iowa City
 Rushia, Mary A., Riverside
 Rusk, Ross P., Dubuque
 Russ, Jesse E., Rake
 Russell, Elwood P., Burlington
 Russell, John, Des Moines
 Russell, Ralph E., Waterloo
 Rust, Emery A., Webb
 Ruth, Verl A., Des Moines
 Ryan, Allen J., Harlan
 Ryan, Cyril J., Creston
 Ryan, Granville N., Des Moines (L.M.)
 Ryan, Martin J., Sioux City
 Ryan, Robert A., Fairfield
- Saar, Jesse L., Donnellson
 Saar, Jesse L., Jr., Burlington
 Saar, John W., Keokuk
 Sage, Erwin C., San Francisco, Calif.
 Sahs, Adolph L., Iowa City
 St. Onge, Joseph A., Sioux City
 Salisbury, Frederick S., Portland, Ore.
 Samberg, Harry H., Fort Des Moines
 Sampson, Carl E., Creston
 Sampson, Frank E., Creston (L.M.)
 Sams, Joseph H., Clarion (L.M.)
 Sanders, George E., Des Moines
 Sanders, Matthew G., Fort Dodge
 Sanders, William E., Long Beach, Calif.
 Sarff, Floyd G., Logan
 Sartor, Guido J., Mason City
 Sartor, Pierre, Titonka
 Sattler, Dwight G., Kalona
 Sauer, Harold E., Marshalltown
 Savage, Lester W., Harlan
 Sawtelle, William W., Iowa City
 Sawyer, Grace M., Woodward
 Sawyer, Prince E., Sioux City (L.M.)
 Saylor, Harley L., Des Moines (L.M.)
 Sayre, Ivan K., St. Charles
 Scales, Emmet T., Des Moines
 Scanlan, George C., Omaha, Neb.
 Scanlan, Maurice, DeWitt
 Scanlon, George H., Iowa City
 Schadt, Frederick C., Williamsburg
 Schaefer, Paul H., Burlington
 Schaeferle, Lawrence G., Gladbrook
 Schaeferle, Martin J., Eagle Grove
 Schafer, Leander H., DeWitt
 Schanche, Arthur N., Ames
 Scharle, Theodore, Dubuque
 Scharnweber, Henry C., Boone
 Schenk, Erwin, Des Moines
 Schiff, Joseph, Walla Walla, Wash.
 Schill, Austin E., Des Moines
 Schissel, Donald, Des Moines
 Schlaser, Verne L., Des Moines
 Schlichtemeier, Ellis O., Peterson
 Schmitz, Henry C., Des Moines
 Schnug, George E., Dows
 Schonover, Richard, Bloomfield
 Schrier, Harold L., Fayette
 Schroeder, Adrian J., Marshalltown
 Schroeder, Frank N., Ryan
 Schroeder, Leslie V., Walcott
 Schrup, Joseph H., Dubuque (L.M.)
 Schueller, Charles J., Dubuque
 Schultz, Albert A., Fort Dodge
 Schultz, Ivan T., Humboldt
 Schultz, Nelle E. T., Humboldt
 Schultz, Marvin H., Waterloo
 Schutter, John M., Algona
 Schwartz, John W., Sioux City
 Schwidde, Jess T., Iowa City
 Scott, Phillip A., Spirit Lake
 Scott, Sophie H., Des Moines (L.M.)
 Seaman, Charles L., Cherokee
 Sedlacek, Leo B., Cedar Rapids
 Seely, Harmon D., Cherokee
- Seibert, Cecil W., Waterloo
 Seidler, William A., Jamaica (L.M.)
 Seidler, William A., Jr., Jamaica
 Seiler, Raymond A., Blairstown
 Sellards, Joseph W., Clarinda
 Sellers, Earl D., Moulton
 Sellers, Harry W., Ottumwa
 Sells, Benjamin B., Independence
 Selman, Ralph J., Ottumwa
 Selo, Rudolph A., Hazleton
 Senska, Frank R., Brandon
 Senty, Elmer G., Davenport
 Severson, George J., Slater
 Severson, Wayne L., Slater
 Shafer, Arthur W., Davenport
 Shafer, Lee E., Davenport
 Shane, Robert S., Pilot Mound
 Shannon, Edwin R., Waterloo
 Shapiro, Seymour I., Iowa City
 Sharpe, Donald C., Dubuque
 Shaw, Albert E., Des Moines
 Shaw, David F., Britt
 Shaw, Ernest E., Indianola
 *Shaw, Mathew M., Madrid
 Shaw, Robert E., Waverly
 Shea, Thomas E., Storm Lake
 Sheeler, Ivan H., Des Moines
 Sheets, Raymond F., Iowa City
 *Sheimo, Stanton L., San Francisco, Calif.
 Shelton, Charles D., Bloomfield (L.M.)
 Shepherd, Loyd K., Des Moines
 Sherlock, John H., Rock Rapids
 Sherman, Richard C., Farley
 Shiffler, H. Kirby, Des Moines
 Shine, Dan W., Oelwein
 Shonka, Thomas E., Malvern
 Shope, Charles D., Greenfield
 Shorey, Joseph R., Davenport
 Shrader, John C., Fort Dodge
 Shulkin, Sam H., Sioux City
 Shulman, Herbert, Waterloo
 Shurts, John J., Eldora
 Siberts, Frank L., Hampton
 Sibley, Edward H., Sioux City
 Sigworth, Frederick B., Anamosa
 Simmons, Ralph R., Des Moines
 Simons, James D., Leon
 *Simonsen, Marie N., Great Lakes, Ill.
 Simpson, N. Henry, Jr., Des Moines
 Sindelar, Joseph B., Minden
 Singer, John R., Newton
 Singer, Siegmund F., Ottumwa
 Sinn, Irvin J., Williamsburg
 Sinning, Augustus, Iowa City
 Sinning, John E., Marshalltown
 *Skaggs, Joseph T., Ancon, Panama Canal Zone
 Skallerup, Walter M., Walker
 Skelley, Paul B., Jr., Dubuque
 Skultety, James A., Des Moines
 Sloan, Fred R., Waterloo
 Smazal, Stanley F., Davenport
 Smead, Howard H., Des Moines
 Smead, Leslie L., Newton
 Smiley, Ralph E., Mason City
 Smith, Alfred N., Des Moines
 Smith, Anthony P., Waucoma
 Smith, Arthur F., Manning
 Smith, Cecil R., Wyoming
 Smith, Channing G., Granger
 Smith, Elmer M., Eagle Grove
 Smith, Eugene E., Waterloo
 Smith, Franklin C., Mount Airy (L.M.)
 Smith, Harold F., Iowa City
 Smith, Herman J., Des Moines
 Smith, Homer A., Correctionville
 Smith, Howard W., Woodward
 Smith, Jason N., Iowa City
 Smith, John E., Clarence
 Smith, Lawrence D., Des Moines
 Smith, Rex I., Waterloo
 Smith, Robert A., Albia
 Smith, Robert T., Granger
 Smith, Rodger B., Mason City
 Smouse, William O., Biloxi, Miss. (L.M.)
 Smrha, James A., Cedar Rapids
 Smythe, Arnold M., Des Moines
 Snook, Lee O., Jr., Wesley
 Snyder, Dean C., DeWitt
 Snyder, John A., Roland
 Snyder, Raleigh R., Des Moines
 Sohm, Herbert A., Des Moines
 Sokol, Charles R., State Center
 *Soley, Mayo H., Iowa City
 Solis, Delmar B., Chariton
 Somers, Pearl E., Tullahoma, Tenn. (L.M.)
 Sones, Clement A., Des Moines
 Sorensen, Elmer M., Red Oak
 Sorensen, Harold E., Graettinger
 Sorensen, Aral C., Davenport
 Sorensen, Kermit R., Sabula
 Sorenson, Philip W., Cedar Falls
- Spain, Robert T., Conrad
 Sparks, Francis R., Waverly (L.M.)
 Spear, William, Oakdale
 Spearing, Joseph H., Harlan
 Speidel, Glen P., Hartford, Conn.
 Spellman, Martin T., Cedar Rapids
 Spencer, Philip L., Baxter
 Sperow, Wendell B., Nevada
 Sperry, Frederick S., Clarinda
 Spevak, Jack, Des Moines
 Spielhagen, Guenther F., Iowa City
 Spilman, Harold A., Ottumwa
 Springer, Floyd A., Des Moines
 Sproul, William M., Des Moines
 Staab, Frederick S., Iowa City
 Stafford, John H., Sac City (L.M.)
 Stam, Nicholas C., Mason City
 Stamler, Frederic W., Iowa City
 Standefer, Joseph M., Des Moines
 Standeven, James W., Oakland
 Stansbury, John E., Cedar Rapids
 Stark, Callistus H., Cedar Rapids
 Stark, Frederick M., Sioux City
 Starr, Charles F., Mason City
 Starry, Allen C., Sioux City
 Stauch, Omar A., Sioux City
 Staudt, Alfred J., Waterloo
 *Stearns, Frederic T., Osage
 *Steelsmith, Frank R., Des Moines
 Steenrod, Emerson J., Iowa Falls
 Steffens, Lincoln F., Dubuque
 Steffy, Fred L., Keokuk
 Stegman, Jacob J., Marshalltown
 Steindler, Arthur, Iowa City
 Stephen, Paul, Manchester
 Stephen, Raymond J., Cedar Rapids
 Stepp, James K., Manchester
 Sternagel, Fred, West Des Moines
 Sternberg, Walter A., Mount Pleasant (L.M.)
 Sternhill, Irving, Mason City
 Sternhill, Isaac, Council Bluffs
 Stevenson, Eber F., Waterloo (L.M.)
 Steves, Richard J., Des Moines
 Stewart, John H., Ottumwa
 Stewart, John K., Clinton
 Stewart, William L., Mediapolis
 Stickler, Robert B., Iowa City
 Stimac, Emil M., Princeton
 Stinson, Alice C., Estherville (L.M.)
 Stitt, Paul L., Fort Dodge
 Stoakes, Charles S., Lime Springs
 Stober, Raymond W., Charles City
 Stolley, J. George, Moline
 Stolley, Robert J., New London
 Storck, Robert D., Dubuque
 Straub, Joseph J., Iowa City
 Strawn, John T., Des Moines
 Stribley, Harry A., Dubuque
 Stroy, Herbert E., Osceola
 Stuart, Percy E., Nashua
 Stueland, Alvin J. R., Mason City
 Stumm, Ernest H., Denver
 Stutsman, Eli E., Washington
 *Stutsman, Robert E., New York, N. Y.
 *Suchomel, Thomas F., Cedar Rapids
 Sugg, Herbert R., Clinton (L.M.)
 Sulek, Arthur E., Cedar Rapids
 Sullivan, John J., Clinton
 Sullivan, Lawrence F., Donahue
 Sulzbach, John F., Iowa City
 Sunderbruch, John H., Davenport
 Svendsen, Reinert N., Decorah
 Swallum, James A., Storm Lake
 Swanson, Leslie W., Mason City
 Sweeney, Donald B., Iowa City
 Sweeney, Lloyd J., Sanborn
 Swegart, Jack E., Maquoketa
 Swift, Frederick J., Maquoketa
 Swift, Frederick J., Jr., Maquoketa
 Swinney, Roy G., Richland
 Switzer, Robert A., Oakdale
 Sybenga, Jacob J., Pella
 Synhorst, John B., Des Moines
 Sywassink, George A., Muscatine
- Tait, John H., Des Moines
 Talley, Louis F., Marshalltown
 Tamisiea, Francis X., Missouri Valley
 Taylor, Charles L., Pomeroy
 Taylor, Edward D., Bettendorf (L.M.)
 Taylor, Ingram C., Martinsburg, W. Va.
 Taylor, Lawrence A., Ottumwa
 Taylor, Maude, Ottumwa
 Taylor, Robert S., Davenport
 Taylor, Wendel W., Sheffield
 Tempel, Paul F., Steamboat Rock
 Teufel, John C., Davenport
 Thaler, David, Cedar Rapids
 Thatcher, Wilbur C., Fort Dodge
 Thayer, Wilbur F., Ocheyedan
 Thein, Garfield M., Oelwein
 Theisen, Roy I., Dubuque

- Thielen, Edward W., Waterloo
Thielen, John B., Fonda
Thomas, Clifford W., Mason City
Thomas, Clyde E., Keystone
Thomas, Colin G., Monticello
Thomas, Colin G., Jr., Iowa City
Thomas, James H., Jr., Sibley
Thomas, William H., McGregor
Thompson, Elvin D., Jefferson
Thompson, Howard E., Dubuque
Thompson, James R., Waterloo
Thompson, Kenneth L., Oakland
Thompson, Virginia D., Des Moines
Thomsen, Thomas F., Red Oak
Thorburn, Oral L., Ames
Thornburg, William V., Guthrie Center (L.M.)
Thornell, Joseph B., Council Bluffs
Thornton, F. Eberle, Des Moines
Thornton, John W., Lansing
Thornton, Thomas F., Waterloo
Thornston, Thomas F., Jr., Waterloo
Thorsness, Edwin T., Dubuque
Thorson, John A., Dubuque
Throckmorton, Jeannette Dean, Des Moines (L.M.)
Throckmorton, J. Fred, Des Moines
Throckmorton, Robert F., Des Moines (L.M.)
Throckmorton, Scott L., Chariton
Throckmorton, Tom B., Des Moines
Throckmorton, Tom D., Des Moines
Tice, Claude B., Mason City
Tice, George I., Mason City
Tidrick, Robert T., Iowa City
Tiedeman, John P., Sioux City
Tierney, Edmund J., Sioux City
Tierney, James M., Carroll
Tilton, John J., Bellevue
Tingwald, Fred R., Iowa City
Tinley, Mary L., Council Bluffs (L.M.)
Tinley, Mathew A., Council Bluffs
Tinley, Robert E., Council Bluffs
Tinsman, Eugene, Orient
Titus, Elton L., Iowa City
Todd, Donald W., Guthrie Center
Tolliver, Hillard A., Charles City
Tombaugh, Frank M., Burlington (L.M.)
Toubes, Abraham A., Des Moines
Towle, Robert A., Davenport
Tracy, John S., Sioux City
Trafton, Harold F., Council Bluffs
Traister, John E., Eddyville
Trey, Bernard L., Marshalltown
Treyner, Jack V., Council Bluffs
Trimbo, Joseph O., Chelsea
Troxell, Millard A., Nora Springs
Trueblood, Clare A., Indianola
Trunnell, Thomas L., Waterloo
Turner, Howard V., Des Moines
Turner, Lee R., Renwick
Turner, William R., Fort Dodge
Tyler, William H., Cedar Rapids
Tyrrell, Joseph W., Des Moines (L.M.)
Tyson, John J., Des Moines
- Unger, David, Des Moines
Updegraff, Charles L., Boone
- Valiquette, Frank G., Sioux City
Van Allen, Maurice W., Davenport
Van Camp, Thomas H., Breda
Vander Laan, Cornelius A., Iowa City
Vander Meulen, Herman C., Pella
Vander Stoep, Harry L., LeMars
Vander Veer, Frank L., Janesville (L.M.)
Van Duzer, William R., Casey
Van Epps, Clarence E., Iowa City
Van Epps, Eugene F., Iowa City
Vangness, Ingram U., Sioux City
Van Hale, Laurence A., Los Angeles, Calif.
Van Metre, Paul W., Rockwell City
Van Patten, Ernest M., Fort Dodge
Van Tiger, William H., Eldora
Van Werden, Benjamin D., Keokuk
Van Zante, Peter, Pella
Van Zanten, William, Brighton
Vaubel, Ellis K., Estherville
Veldhouse, Richard H., Cedar Rapids
Veltman, John F., Winterset
Vermeer, Gerrit E., Sheldon
Vernon, Frederick G., Jewell
Vesterberg, Peder H., Forest City (L.M.)
Victorine, Edward M., Cedar Rapids
Vincent, Jack F., Fort Dodge
Vineyard, Thomas L., Ottumwa
Vinson, Harry W., Ottumwa
Virtue, Robert W., Iowa City
- Voelker, Chris A., Fort Dodge
Voigt, Ernest J., Burlington
Voigt, Frank O. W., Oskaloosa
von Lackum, Herman J., Dysart (L.M.)
von Lackum, J. Kenneth, Cedar Rapids
von Lackum, LeRoy F., Oelwein
Vorpahl, Rudolph A., Cedar Rapids
Voss, Otto R., Davenport
- Waddell, Jesse C., Paton
Waggoner, Charles V., Clinton
Wagner, Eugene C., Plainfield
Wagner, James A., Primghar
Wahrer, Frederick L., Marshalltown
Wainwright, Maxwell T., Sioux City
Wakeman, Allie H., Fort Dodge
Walker, Charles C., Des Moines
Walker, Glenn L., Iowa City
Walker, Harry L., Cedar Rapids (L.M.)
Walker, Herbert P., Clarion
Walker, John R., Iowa City
Walker, Thomas G., Riceville
Walker, Thomas S., Riceville (L.M.)
Wall, David, Ames
Wallace, Evelyn G., Iowa City
Walliker, Wilbur M., Clinton
Walsh, Eugene L., Huntington, W. Va.
Walsh, William E., Hawkeye
Walston, Edwin B., Des Moines (L.M.)
Walton, Seth G., Hampton
Walvoord, Carl A., Dunlap
Wanamaker, Ambrose E., Hamburg (L.M.)
Wanamaker, Ambrose R., Hamburg
Ward, Donovan F., Dubuque
Ward, Loraine W., Oelwein
Ward, Thomas L., Arnolds Park
Ware, Stephen C., Iowa City
Warner, Emory D., Iowa City
Warren, Elbert T., Stuart
Waterbury, Charles A., Waterloo (L.M.)
Waterbury, Charles A., Jr., Waterloo
Watkin, Clifford R., Sioux City
Watson, Charles E., Stacyville
Watson, Edward A., Belmond
Watson, Elbert J., Diagonal (L.M.)
Watters, George H., Des Moines
Watters, Phillip G., Des Moines
Watts, A. Fred, Ceston
Watts, Clyde F., Marengo
Weaver, David F., Davenport
Weaver, Kenneth H., Union
Weaver, Ralph L., Cumberland
Webb, Daniel R., Cedar Rapids
Weber, Frank N., Walnut
Weber, Leslie E., Wapello
Weber, William W., Pomeroy
Wedel, James R., Keokuk
Weems, Nev E., Paulina
Wehman, Edward J., Burlington
Weih, Elmer P., Clinton
Weih, Jack E., Iowa City
Weinberg, Harry B., Davenport
Weingart, Julius S., Des Moines
Weir, Edward C., Council Bluffs
Weir, Matt B., Griswold
Weis, Howard A., Davenport
Weland, Regis E., Cedar Rapids
Wells, Fred L., Des Moines (L.M.)
Wells, Rodney C., Marshalltown
Wendell, Margaret R., Pella
Wentworth, Laydon S., Marble Rock
Wentzien, Albert J., Tama
Werner, Carl A. A., Des Moines
Werner, Harold T., Fort Madison
West, Alroy G., Council Bluffs
West, Harry D., Des Moines
West, Norman D., Avoca
West, Walter E., Centerville
Westenberger, Joseph C., St. Ansgar
Westly, G. Travis, Des Moines
Westly, Gabriel S., Manly
Westly, John S., Des Moines
Westly, Soren S., Manly
Weston, B. Raymond, Mason City
Weston, Robert A., Des Moines
Wetrich, Max F., Grand Junction
Weyer, Joseph J., Fort Dodge
Wheelock, Mark C., Chicago, Ill.
Whitaker, Ben T., Boone
White, George H., Des Moines
White, Harold E., Knoxville
White, Paul A., Davenport
White, Seward, Olin
Whitehill, Nelson M., Boone
Whitehouse, William N., Ottumwa
Whitley, Ralph L., Osage (L.M.)
Whitmore, James E., Sumner
Whitmire, William L., Sumner (L.M.)
Wichern, Homer E., Des Moines
- Wicks, Ralph L., Boone
Widmer, James G., Wayland
Widmer, Reuben B., Winfield
Wilcox, Delano, Malcom (L.M.)
Wilcox, Edgar B., Oskaloosa
Wilcox, Keith E., Muscatine
Wildberger, William C., Waverly
Wiley, Ralph E., Fontanelle
Wilke, Frank A., Perry
Wilkinson, George W., Burlington
Wilkinson, Levi J., Laurel
Willett, Wilton J., Manchester
Williams, Benjamin G., Oskaloosa (L.M.)
Williams, Edward B., Montezuma (L.M.)
Williams, Edward M., Norway
*Williams, E. Marsh, Oskaloosa (L.M.)
Williams, Frank S., Villisca (L.M.)
Williams, Nathan B., Belle Plaine
Williams, Robert L., Lakota
Wilson, Charles R., Manson
Wilson, F. Dale, Davenport
Wilson, Frank D., Sioux City
Wilson, Fred C., Colesburg
Wilson, Frederic L., Sioux City
Wilson, Frederic W., Sioux City
Winder, Clifford D., Waterloo
Winnett, Edwin B., Des Moines
Wintenburg, Edward J., Van Nuys, Calif.
Wirsig, Arnold O., Shenandoah
Wirtz, Dwight C., Des Moines
Wise, Arthur C., Oakdale
Wise, James H., Cherokee
Witte, Max E., Independence
Wolcott, Ruth F., Spirit Lake
Wolcott, W. Eugene, West Des Moines (L.M.)
Wolf, Henry H., Elgin
Wolf, William J., West Union
Wolfe, Joseph H., Iowa City
Wolfe, Otis D., Marshalltown
Wolfe, Otis R., Marshalltown
Wolfe, Russell M., Marshalltown
Wolfe, Wilson C., Ottumwa
Wolfson, Harold, Kingsley
Wolpert, Paul L., Onawa
Wolverton, Benjamin F., Cedar Rapids
Womack, Nathan A., Iowa City
Wood, John R., Wadena
Wood, Rollin W., Newton
Woodard, Floyd O., Des Moines
Woodbridge, James W., Emmetsburg (L.M.)
Woodhouse, George R., Vinton
Woodhouse, Keith W., Cedar Rapids
Woods, Andrew H., Iowa City
Woods, Arthur D., State Center
Woods, Hugh B., Des Moines
Woodward, Lee R., Mason City
Woolfolk, Jesse H., II, Waterloo
Worley, Charles L., Ottumwa
Worrell, James T., Keosauqua
Wray, Clarence M., Iowa Falls
Wray, Robert M., Cedar Rapids
Wright, Thomas D., Newton
Wright, Walter N., Rose Hill (L.M.)
Wubbena, Arthur C., Rock Rapids
Wurtzer, Ezra L., Clear Lake
Wyatt, Merlin R., Manning
Wykoff, Sarah U., Des Moines
Wyland, Asa O., Underwood (L.M.)
- Yackley, James V., Denison
Yancey, Charles C., Sioux City
Yates, Horace C., Normal, Ill.
Yaborsky, George W., Belle Plaine (L.M.)
Yetter, William L., Iowa City
Yocom, Albert L., Chariton
Yost, Charles G., Center Point
Young, Clifford W., Onawa
Young, Ernest R., Dubuque
Young, George G., Des Moines
Young, Henry C., Bloomfield (L.M.)
Young, Howard O., Marion
Young, James J., Clinton
Young, James W., Des Moines
Young, Richard A., Clarion
Yugend, Sidney F., Indianola
- Zager, Lewis L., Iowa City
Zeilenga, Robert H., Orange City
Ziffren, Sidney E., Iowa City
Zimmerer, Edmund G., Des Moines
Zoller, Sherwood B., Fredericksburg
Zuercher, Arlo R., Cedar Rapids
Zukaitis, Raymond R., Bancroft
Zukerman, Cecil M., Davenport

★Military Service

*Deceased

(L.M.) Life Member

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. ROGER M. MINKEL, Fort Dodge

President-elect—MRS. CLAIRE H. MITCHELL, Indianola

Secretary—MRS. IVAN K. SAYRE, St. Charles

Treasurer—MRS. WILLIAM B. CHASE, JR., Des Moines

Corresponding Secretary—MRS. CHARLES H. COUGHLAN, Fort Dodge

OFFICERS' CONFERENCE

A luncheon conference at the Hotel Savery, Des Moines, May 16, was called by the state president, Mrs. R. M. Minkel, and attended by Mrs. Minkel; Mrs. C. H. Coughlan, corresponding secretary; Mrs. W. B. Chase, Jr., treasurer; Mrs. A. B. Phillips and Mrs. L. K. Shepherd, co-chairmen of public relations; Mrs. C. C. Jones, legislative chairman; Mrs. K. M. Chapler, publications chairman; and Mrs. E. B. Howell and Mrs. J. D. Hennessy, councilors.

Mrs. Minkel, president, conducted the four hour meeting. Ways, means and materials for combating socialized medicine were discussed at length. Materials are available in quantity from the state office of the Auxiliary at Fort Dodge.

The president provided complete lists of Auxiliary membership to those in attendance and also state maps showing organized counties, those anticipating organization, and members-at-large. It is hoped that district meetings may be arranged where information concerning Auxiliary work may be distributed first-hand and where county officers may meet and confer with some of the state officers and the councilor of each district.

The five councilors and Mrs. H. W. Smith, first vice president, were assigned districts.

Mrs. D. F. Rodawig, Spirit Lake, is councilor for the following counties: Lyon, Sioux, Osceola, Dickinson, O'Brien, Clay, Emmet, Palo Alto, Pocahontas, Calhoun, Kossuth, Humboldt, Webster, Winnebago, Hancock, Wright, Hamilton.

Mrs. Donovan F. Ward, Dubuque, is councilor for the following counties: Worth, Cerro Gordo, Franklin, Hardin, Mitchell, Floyd, Butler, Grundy, Howard, Chickasaw, Bremer, Black Hawk, Winneshiek, Fayette, Buchanan, Allamakee, Clayton, Delaware, Dubuque.

Mrs. J. D. Hennessy, Council Bluffs, is councilor for the following counties: Plymouth, Woodbury, Monona, Harrison, Pottawattamie, Cherokee, Ida, Crawford, Shelby, Cass, Buena Vista, Sac, Audubon.

Mrs. A. G. Felter, Van Meter, and Mrs. H. W. Smith, Woodward, are councilors for the following counties: Carroll, Greene, Boone, Story, Marshall, Guthrie, Dallas, Polk, Jasper, Adair, Madison, Marion, Union, Clarke, Lucas, Monroe, Ringgold, Decatur, Wayne, Appanoose, Warren.

Mrs. E. B. Howell, Ottumwa, is councilor for the following counties: Tama, Benton, Linn, Jones,

Jackson, Poweshiek, Iowa, Johnson, Cedar, Clinton, Scott, Mahaska, Keokuk, Washington, Muscatine, Louisa, Wapello, Jefferson, Henry, Des Moines, Lee, Davis, Van Buren.

PROGRAM OUTLINE FOR YEAR 1949-1950

The formative years of our Auxiliary have laid a firm foundation on which to build projects. We take pride in the progress made during those years, but each year we must become more purposeful and meet our opportunities and responsibilities.

Let us remember in setting up our programs that the main functions of the Medical Auxiliary are co-operating with the medical societies, acting as liaison between the medical profession and the public, and giving special attention to those things which affect public health and public welfare.

And always be mindful of this challenge: Ceaseless effort is required of those who would help promote health and health education.

What Every Doctor's Wife Should Know

1. Outline and study your own constitution and the constitution of the W.A.M.A.
2. The American Medical Association's National Health Program. Suggesting reading along this line is contained in the following:
 - a. *Journal of A.M.A.*, Jan. 24, 1948, p. 271-2 (An article entitled "Public Health Service and Medical News").
 - b. Minutes of House of Delegates at the recent A.M.A. session in Chicago.
 - c. *A.M.A. Journal*, issues of July 3, 10, 17, 1948.
3. Prepayment medical and hospital care plans.
4. Compulsory health plans in foreign countries. Familiarize yourself with medical conditions in in other countries.
5. Study groups on a local basis:
 - a. Prepayment medical care plans and hospital plans in your community.
 - b. Public health department—its functions and its need. Point Two of A.M.A. health program.
 - c. Health councils should be promoted.
 - d. Competent authorities on matters of interest to Auxiliary members should be asked to speak at each meeting.
6. Seek always the advice of your advisory council.

7. Make a study of your community health problems. By starting at the roots, we are better qualified to work up to the goal we are trying to reach—"Better Health the American Way."
 8. Interest yourself in all organizations; do not merely belong to clubs, but be an active member and assume leadership in such groups, after thorough investigation and approval of your county medical society.
 9. Invite presidents and members from organizations other than medical ones to attend your health education meetings.
 10. Reading and clipping committees offer every member an opportunity to work. Read, clip and file all newspaper and magazine material pertaining to any phase on health, doctors, hospitals, nurses, labor group health departments, medical insurance, health legislation and the like. It might be wise at some time during the year to go over these clippings with your advisory board and your husband.
 11. Radio Committee. Members interested in working on a program for a local radio station could cover various phases of Auxiliary work and enlighten the public about local and national health problems. All material used should be approved by county medical society.
 12. Health institutes are a most successful method of integrating health education. An Auxiliary may sponsor a panel of qualified speakers. Careful attention must be given to publicity for successful meetings.
 13. Rural Health Programs. Study these and assist in every way possible.
 14. Prepayment medical care plans approved by your state and county medical society should be discussed.
 15. Study the World Medical Association and the World Health Organization. Understand their objectives and how each functions.
 16. Nurse Recruitment. Nurse scholarships and loan funds to enable worthy girls or boys to enter the profession of nursing have been set up by some groups.
 17. Stress attendance at all meetings, and while stressing this point Auxiliary members should do their best to urge the doctors to attend all their meetings. Auxiliary members should also keep their husbands informed of what health problems are being discussed in the community.
 18. A well-thought-out all-year program is essential. See to it that somewhere throughout the year you have left room or planned for a little fun. Remember one of the objectives of the Auxiliary is to promote good fellowship among the medical profession and its families.
 2. Public relations. Arouse interest in improved program of school health services.
 3. Health education on a local level.
 - a. Adequate public health facilities.
 - b. Rural health education.
 - c. Aid in forming community health councils.
 4. Legislation.
 5. Prepayment medical care plans.
 6. Nurse Recruitment.
 7. Strive to interest every eligible woman whose husband is in good standing with his medical society to be an *active* Auxiliary member.
 8. Stimulate attendance at all meetings.
 9. Serve the county and state medical societies and Auxiliaries by being better informed of the needs of the public in all problems pertaining to health.
 10. Seek the advice of your advisory council on all matters pertaining to the program.
 11. Philanthropic projects. Almost every state has found ways of helping the profession and its families. (Scholarships for students.)
 12. Present roundtable discussions or a panel with a question and answer period.
- Promote interesting programs. Work up to the goal we are trying to reach—"Better Health the American Way."
- Mrs. L. A. Coffin, Program Chairman
 Mrs. Howard H. Smead
 Mrs. Ivan K. Sayre
 Mrs. Geo. H. Clark
 Mrs. James D. Hennessy

ANNUAL REPORT OF PROGRAM COMMITTEE

The general themes for our programs were printed in the Journal of the Iowa State Medical Society, May 1948 issue—the year's work to be a continuation program including legislation, health, public relations and the history of the American Medical Association and the Auxiliary.

Recommendations for the 1948-1949 program:

1. That the basic objectives set out in this year's programs be used again:
 - To mould public opinion with correct information.
 - To know what the medical profession means to the human race.
 - To learn what the community can do to improve its health.
 - To be prepared to discuss health matters.
 - To build a feeling of friendship between doctors and wives.
2. That the Program Committee keep a detailed program outline with resource material listed (until supplies are available).

Mrs. L. A. Coffin, Program Chairman
 Mrs. Howard H. Smead
 Mrs. Ivan K. Sayre
 Mrs. Geo. H. Clark
 Mrs. James D. Hennessy

ANNUAL REPORT OF THE LEGISLATIVE COMMITTEE

Not too much credit can be given to the Legislative Committee for spreading of information this year. The Public Relations and Press and Publicity Committees have done most of that.

Build The Auxiliary Program Around The Following:

1. Promotion of *Hygeia*: Have Auxiliary members assume responsibility for placing the magazine in places for public reading, such as schools, beauty parlors, men's clubs, etc.

However, through the Auxiliary News sheet, which most of you received, all doctors' wives were urged to keep up with legislative action of the legislature of the state of Iowa and the Congress of the United States. Radio and press were available to everyone, with the interest to be supplied by ourselves.

All Auxiliary presidents were furnished with a list of the material on hand for reference in preparing papers. This material will be turned over to your next legislative chairman and will still be available for use. There were only a few calls for the loan of this material. After the booklet, "Uncle Sam, M.D.," to the members of the Auxiliary, there were no calls for material. Perhaps the booklet answered all questions, or the information was gleaned from other sources. There will be more information as time goes on, so keep posted.

It was suggested that at least one meeting include discussion of the school issues which were being considered by the Iowa legislature, and pamphlets on this subject were sent to Auxiliary presidents. The Woman's Auxiliary to the Iowa State Medical Society is now a member of the Iowa Council for Better Education, which has its offices on the third floor of the Shops Building in Des Moines. Literature concerning their activities is available on requests sent to their address. I am sure they will be pleased at any show of interest. This organization has five meetings a year, and their programs are interesting. I attended three meetings, and Mrs. Fred Moore represented us at one meeting.

School issues should be of vital interest to all of us, whether or not we have children in school. We should be interested in knowing how the money which we pay in taxes is spent. Did you know that there are 52,000 people in Iowa who have not gone to school beyond the fourth grade? Did you know that there are 8,500 illiterates in Iowa? Let's be very interested in school legislation. Spend some time on this subject in one of your meetings.

In organizations as large and widespread as ours it is difficult to contact each one. We are all interested in our one big problem—compulsory health insurance. The literature put out by the A.M.A. and our Auxiliary is full of information on this subject. Read everything you can. Then we all can be a committee of one to convince as many others as possible that compulsory health insurance is not for the United States.

Latest reports at this time indicate that there will probably not be time to bring this issue before Congress before it adjourns this summer. This does not mean we can let up in our work. It means we may have a little more time to become better prepared.

Learn more and educate many.

Mrs. C. C. Jones, Chairman
Mrs. Elias B. Howell
Mrs. Frank Dörner
Mrs. Ernest Shaw
Mrs. Max Armstrong

ANNUAL REPORT OF THE NURSING INTERESTS COMMITTEE

The Committee on Nursing Interests has been working on two projects during the past year: (1) The Statewide Nursing Survey, and (2) Student Nurse Recruitment.

Statewide Nursing Survey. This survey was made by the Woman's Auxiliary in cooperation with the Iowa State Nurses' Association to ascertain the status and needs of nursing in Iowa, and to meet the growing demand for patient service.

In each county a doctor's wife served as a county chairman, and her committee, composed of one or more members of the county medical society, doctors' wives and nurses, conducted the survey on a county basis. In a few counties the county public health nurse headed the committee. Surveys in about 51 counties have been completed.

The data from the nursing survey helped the Iowa State Nurses' Association in getting the bill (House File 300) passed by the state legislature and signed by Governor Beardsley, permitting the licensure of practical nurses as licensed practical nurses.

Student Nurse Recruitment. Early in the spring of last year literature for high school students and their parents was sent to county medical auxiliaries, doctors' wives and high schools. A specially prepared movie about nurses training, "For You to Decide," was available at the Iowa State Medical Society and at the Iowa State Nurses' Association office at 503 Shops Building, Des Moines.

Many doctors' wives arranged programs through local women's clubs and various organizations where high school girls were invited to hear talks and see the movie which gave facts and interesting information regarding student nurses in the hospital and their social life. In many instances, a student or graduate nurse (sometimes both) attended these meetings and gave interesting talks to the girls. The committee feels that many young girls were given an opportunity to learn more about the advantages of nurses' training as a career and an education for life. The hospital schools for nursing were very cooperative. They generously provided student nurses for the meetings.

A nurse recruitment booth was set up at the state fair under the supervision of Miss May Campbell, public health nurse supervisor. The chairman of the Nursing Interests Committee of the Woman's Auxiliary worked with Miss Campbell in formulating plans for the booth. The Des Moines hospitals furnished student nurses.

The nurse recruitment committee feels that student nurse recruitment should be a continuing program. Doctors' wives can individually use every opportunity to encourage young girls to consider seriously nurses' training as a profession and a foundation for family living. Doctors' wives can arrange programs where young girls can learn the facts about nursing. This is probably best done through other organizations in each community,

such as women's clubs, Parent-Teacher associations, American Legion auxiliaries, church and Sunday school groups, Farm Bureau meetings, 4-H clubs, and high school assemblies.

The hospital nearest you will be glad to furnish a nurse-speaker as a part of the program and use the literature and movie that are available. Hospitals also have literature to give to interested girls.

We can do a good job of student nurse recruitment if we are well informed and show interest and enthusiasm in the educational future of the young women in our respective communities.

Two extensive studies have been made regarding the nursing problem and nursing for the future. A report of the committee appointed by the American Medical Association will be found in the issue of July 3, 1948, *Journal of the American Medical Association*. The other study of the nursing problem was prepared for the National Nursing Council by Dr. Esther Brown, director of the Department of Studies in the Professions of the Russell Sage Foundation. Dr. Brown's report has just been published. It is titled "Nursing for the Future." Both of these reports are well worth reading and help us to understand better the position of the nurse in the community.

The State Committee on Nursing Interests wishes to express thanks and sincere appreciation for the excellent work that has been accomplished and is still being done.

This committee wishes to acknowledge and to thank Mrs. Fred Moore, committee member and councilor, for her advice and generous assistance throughout the year.

Mrs. Howard W. Smith, Chairman
Mrs. Ira N. Crow
Mrs. Harry H. Lamb
Mrs. Walter Hombach
Mrs. Fred Moore
Mrs. Louis Talley

ANNUAL REPORT OF THE STATE HYGEIA COMMITTEE

In June the State *Hygeia* Committee met in Des Moines with Mrs. Felter to plan the promotion of *Hygeia* for the year. I also attended the fall executive board meeting, at which time a report was given of the plan for the promotion of *Hygeia*.

In September letters were sent to the county presidents asking for the name of the county chairman. This item was reported to the Woman's Auxiliary News for October and also a brief plan for the promotion of *Hygeia*.

In October letters were sent to each county *Hygeia* chairman outlining the plans for the promotion of *Hygeia*, by trying to place copies of *Hygeia* in doctor's and dentist's offices and schools and libraries of each county. The list of chairmen was also sent to *Hygeia* asking them to send publicity material to each chairman.

In February I wrote to *Hygeia* asking them to send me a report of the subscriptions sent in from Iowa during the contest. I received the following report in reply: Butler, 7; Dallas-Guthrie, 49;

Delaware, 4; Dubuque, 51*; Henry, 1; Madison, 4; Mahaska, 2; Polk, 47; Webster, 6; Woodbury, 16; Total, 187.

It is a slight increase of 50 points over last year.

Mrs. J. Stewart Jackson

*Ranked in first 10 per cent of Auxiliaries of Group II; 19-35 membership.

ACTIVITIES OF COUNTY AUXILIARIES

Dallas-Guthrie Counties

Following dinner with the doctors at the Presbyterian Church in Panora, the Woman's Auxiliary to the Dallas-Guthrie Medical Society held its meeting the evening of May 19. Mrs. D. W. Todd, president, presided. Seven members answered roll call. A check for \$12.00 was voted to the Nurses' Loan Fund. A report of the annual state meeting was given by Mrs. C. A. Nicoll. The program was given by Mrs. Howard of Panora. The Howards have recently returned from Saipan where Dr. Howard was in the Naval hospital. Mrs. Howard told of life on the island as lived by the Americans and the natives and of her work in the schools for the natives.

Emmet County

The Auxiliary to the Emmet County Medical Society reorganized in April. Mrs. J. P. Clark is president and Mrs. E. K. Vaubel, secretary-treasurer. Nine members attended the May meeting, and each contributed 50 cents toward the Nurses' Loan Fund.

Union County

Greater Community Hospital at Creston was opened to visitors May 12. The Union County Medical Auxiliary held open house in observance of national hospital day. Members of the Auxiliary guided 75 visitors through the institutions. Tea was served in the hospital dining room. Mrs. C. B. Roe, of Afton, is president of the auxiliary.

Wapello County

The April 27 meeting of the Wapello County Auxiliary was the largest attended in its history. Mrs. E. B. Howell, president, reported on the annual state meeting. Dr. Wilson Wolfe read a paper on socialized medicine.

Committees were organized for immediate action to circularize in industrial firms and factories pamphlets on socialized medicine. All reading matter other than that on socialized medicine will be removed from reception rooms of doctors and dentists for a time. Dentists and their wives will cooperate with the Medical Society and Auxiliary in the educational campaign. One thousand cards opposing compulsory health insurance have been printed to be signed by laymen and professional people and will be mailed to congressmen. Talks on the subject have been arranged for all types of group meetings. All P.T.A. programs next fall will include speeches on compulsory health insurance, and there will be talks at high school chapels. The subject was presented at the southeastern Iowa dental picnic in June.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

THE BASIC NEUROSIS: Oral Regression and Psychic Masochism—By Edmund Bergler, M.D., New York, Grune & Stratton, Inc., 1949. Price \$5.00.

GERIATRIC MEDICINE: The Care of the Aging and the Aged—Edited by Edward J. Stieglitz, M.S., M.D., F.A.C.P., Attending Internist, Suburban Hospital, Bethesda, Maryland; Doctors Hospital, Washington, D. C. New Second Edition. Philadelphia and London, W. B. Saunders Company, 1949. Price \$12.00.

HEMATOLOGY: For Students and Practitioners—By Willis M. Fowler, M.D., Professor of Internal Medicine, University of Iowa, Iowa City. Revised Second Edition; With a chapter by ELMER L. DEGOWIN, M.D., Associate Professor of Internal Medicine, University of Iowa, Iowa City. New York, Paul B. Hoeber, Inc., 1949. Price \$8.50.

HOW TO BECOME A DOCTOR: A Complete Guide to the Study of Medicine, Dentistry, Pharmacy, Veterinarian Medicine, Occupational Therapy, Chiropody and Foot Surgery, Optometry, Hospital Administration, Medical Illustration, and the Sciences—By George R. Mood, A.B., M.A., Examiner and Recorder, University of Illinois, Colleges of Medicine, Dentistry and Pharmacy. Philadelphia and Toronto, The Blakiston Company, 1949. Price \$2.00.

ORAL AND DENTAL DIAGNOSIS: With Suggestions for Treatment—By Kurt H. Thoma, D.M.D., F.D.S.R.C.S., Eng., Professor of Oral Surgery, Emeritus, and Brackett Professor of Oral Pathology, Harvard University. With Contributions by HENRY GOLDMAN, D.M.D., Head of the Dental Department, Beth Israel Hospital, Boston; FRED TREVOR, D.M.D., Formerly Instructor in Oral Pathology, Harvard Dental School. New Third Edition. Philadelphia and London, W. B. Saunders Company, 1949. Price \$9.50.

PSYCHOSOMATIC MEDICINE: The Clinical Application of Psychopathology to General Medical Problems—By Edward Weiss, M.D., Professor of Clinical Medicine, Temple University Medical School, Philadelphia; and O. SPURGEON ENGLISH, M.D., Professor of Psychiatry, Temple University Medical School, Philadelphia. New Second Edition. Philadelphia and London, W. B. Saunders Company, 1949. Price \$9.50.

TRENDS IN MEDICAL EDUCATION: The New York Academy of Medicine Institute on Medical Education, 1947—Edited by Mahlon Ashford, M.D. New York, The Commonwealth Fund, 1949. Price \$3.00.

BOOK REVIEWS

THE 1948 YEAR BOOK OF GENERAL SURGERY

Edited by Evarts A. Graham, A.B., M.D., Professor of Surgery, Washington University School of Medicine, Surgeon-in-Chief of the Barnes Hospital and of the Children's Hospital, St. Louis. Chicago, The Year Book Publishers, 1949. Price \$4.50.

The Year Book consists of brief abstracts of significant surgical literature published in the past year. Each article is a fairly complete abstract of the original paper, and the source is given for further reference. There are many refreshing comments by the editor as well as abundant illustrations. Individual subjects are arranged in groups as to specialty or system involved for easy reference.

This is an excellent manual for the busy practitioner who cannot take time for extensive reading.

T. F. T.

BLOOD TRANSFUSION

By Elmer L. DeGowin, M.D., Associate Professor of Internal Medicine, State University of Iowa; ROBERT C. HARDIN, M.D., Assistant Professor of Internal Medicine, State University of Iowa; and JOHN B. ALSEVER, M.D., Senior Surgeon, U. S. Public Health Service. Philadelphia and London, W. B. Saunders Company, 1949. Price, \$9.00.

It is the avowed purpose of the authors of this volume to include material of interest to "(1) physicians and medical students whose patients receive transfusions, (2) physicians and others who supervise transfusion services, and (3) laboratory technicians who perform the tests and procedures necessary to modern transfusion."

In general, it would seem to the reviewer that these objectives are adequately accomplished, although presentation of such a large subject designed for an audience of widely variant interests relative to the subject has necessitated superficial treatment in some areas.

The book is constructed in nine parts: Introduction; Clinical Use of Blood and Its Derivatives; Immunology of Blood; Technical Section; Transfusion of Whole Blood; Preparation and Administration of Plasma; Preparation and Administration of the Blood Derivatives and Plasma Substitutes; transfusion Services; and Transfusion Apparatus.

The technical section is particularly well done; it is lucidly written and excellently illustrated, and covers the subject adequately. The discussion of the clinical aspects of shock will seem superficial to many. Whatever view one may hold regarding the role of the adrenal glands in shock, the statement that the elucidation of its role "seems unessential to the explanation of shock" must be considered unjustifiably smug.

In the opinion of this reviewer the scope of this book is too broad to justify the space utilized in discussion of the preparation of plasma, particularly frozen and dried plasma—facilities for which will not often be found in the average laboratory. The subject of preparation of such materials would seem more reasonably directed to a somewhat more restricted audience.

Despite the above noted observations, this book in toto accomplishes its purpose well and fills a distinct need in the medical literature.

S. K. D.

ANESTHESIA, PRINCIPLES AND PRACTICE

By Alice M. Hunt, R.N., Associate Professor of Anesthesia, Emeritus, Yale School of Medicine, New Haven, Conn. G. P. Putnam's Sons, 1949. Price \$2.60.

This is a well written book for the nurse anesthetist. Various phases of the art of anesthesia, often lost sight of in more scientific works, are thoroughly described. The chapters on preoperative and postoperative care of the patient would be instructive for all nurses, whether interested in anesthesia or not.

E. P. L.

ESSENTIALS OF GYNECOLOGIC ENDOCRINOLOGY

By Gardner M. Riley, Ph.D., Assistant Professor of Obstetrics and Gynecology, University of Michigan Medical School. Ann Arbor, Mich., Caduceus Press, 1948. Price \$3.00.

This book summarizes the recent material written on gynecologic endocrinology. Methods of diagnosis and treatment of gynecologic disorders due to endocrinologic dysfunction are presented with especial clarity and in detail.

Of current interest are the sections on the physiology of the adrenal glands and on the new tests for pregnancy.

The book, prepared in concise form, will be extremely valuable to medical students and to those of the medical profession who deal with gynecologic problems.

D. G. W.

CLINICAL ASPECTS AND TREATMENT OF SURGICAL INFECTIONS

By Frank Lamont Meleney, M.D., F.A.C.S., Associate Professor of Clinical Surgery, College of Physicians and Surgeons, Columbia University; Associate Visiting Surgeon, Presbyterian Hospital, New York City. With a Foreword by ALLEN O. WHIPPLE, M.D. Philadelphia and London, W. B. Saunders Company, 1949. Price, \$12.00.

This volume embodies much of the clinical experience of a bacteriologist-surgeon, who first brought to our attention the cause and treatment of undermining burrowing ulcers and progressive synergistic gangrene. The newest antibiotic, bacitracin, was discovered and developed in his laboratory. This book is in keeping with his thoroughness. He clearly discusses the implications of surgical infections in all body compartments, a discussion complete enough to be of real interest to abdominal, thoracic, orthopedic, plastic, or urologic surgeons. Amply illustrated by photographs, roentgenograms and charts, topics such as infections of the genito-urinary tract, hand and central nervous systems are succinctly presented. From no other source could we more clearly under-

stand the status and limitations of present day antibiotic therapy. The significance of infections in different systems, organs and tissues is clearly discussed and correlated with specific case presentations representing a lifetime of observation. Quoting Dr. Allen O. Whipple in his foreword to the book, "This work is no mere compilation; it is made up from the author's intimate knowledge, based on long experience in the surgery of bacterial infections, and I am sure it will fill a unique position in surgical literature."

J. L. M.

OCCUPATIONAL THERAPY SOURCE BOOK

Edited by Sidney Licht, M.D. With an introduction by C. CHARLES BURLINGAME, M.D., Psychiatrist-in-Chief, The Institute of Living. Baltimore, The Williams and Wilkins Company, 1948. Price, \$1.00.

In an introductory article the author sketches the early history of activity therapy as applied to psychiatry and from the last century B. C. to 1917. Asclepiades was the first to recommend activities, including music, for mental patients. In 1917 an enthusiast who helped organize the parent organization first used the name of occupational therapy.

Licht then selects 10 source articles, beginning with Pinel in 1801 and closing with Reid in 1914, just before the first professional school for occupational therapy was established in the United States, which now has more therapists than does the rest of the world. The 10 sources cover most of the important early writings in the field and show both the excellencies and crudities of early work. The essays of Esquirol and of Kirkbride have the most interest. Esquirol objects to drama for the mentally ill but extols music, travel and bodily exercise. Kirkbride recommends outdoor exercise, occupation and an hour's evening entertainment every weekday for nine months of the year.

Charles Burlingame, psychiatrist-in-chief of the Institute of Living, writes a foreword which relates the material of this source book to modern occupational therapy.

P. T. C.

1948 YEAR BOOK OF PEDIATRICS

Edited by Henry G. Poncher, M.D., Professor and Head, Department of Pediatrics, University of Illinois College of Medicine, Chicago. ISAAC A. ABT, M.D., Editor Emeritus. Chicago, The Year Book Publishers, Inc., 1948. Price \$4.50.

This edition marks the change in editorship from Dr. Isaac Abt to Dr. Henry G. Poncher. It is a review of the current literature and is a practical means of keeping the busy physician aware of current contributions to the prevention and treatment of disease in children. Condensations of many articles are presented and are commented on by the editor. His explanations and comments add much to the interest and value of the book.

H. C. S.

SOCIETY PROCEEDINGS

MEETINGS

Calhoun and Sac Counties

The Calhoun and Sac County Medical Societies held a joint meeting on May 19 at the Brower Hotel in Rockwell City. Following dinner, Dr. Edmund Zimmerer, director of Cancer Control, State Department of Health, spoke on the topic of diagnosis of cancer. A movie, "Cancer: Problem of Early Diagnosis," was presented.

Hardin County

The Hardin County Medical Society observed its fiftieth anniversary at its meeting May 16 at the Country Club at Ackley. Dr. Clark N. Cooper, of Waterloo, gave an address on "The Latest Advancements in the Treatment of Gallbladder Diseases," which was followed by a roundtable discussion. Dr. Clarence M. Wray, of Iowa Falls, gave a talk, comparing the practice of medicine today with that 40 years ago and reminiscing on his first attendance of the society.

Iowa and Illinois Central District Medical Association

Dr. George W. Cusick, of Davenport, was elected president of the Iowa and Illinois Central District Medical Association at the annual meeting held June 25 at the Rock Island Arsenal Golf Club. Dr. F. E. Bollaert, of East Moline, was elected vice president and president-elect; Dr. James Dunn, of Davenport, was re-elected secretary and editor of the group's bulletin; Dr. Walter W. Wise, of Rock Island, was re-elected first assistant secretary, and Dr. J. H. Sunderbruch, of Davenport, second assistant secretary.

Scott County

The Scott County Medical Society met June 15 at the Sportsmen Club in Bettendorf for a picnic. This meeting marks the adjournment of the group until next fall.

Washington County

The Washington County Medical Society met May 26 in the Nurses's Home in Washington. Dr. Nathan A. Womack, of Iowa City, Department of Surgery, spoke on "Differential Diagnosis of Acute Abdominal Conditions," illustrating his talk with lantern slides.

Webster County

The Webster County Medical Society, at a meeting June 17 at Hotel Warden, Fort Dodge, was addressed by Dr. Carl Rusche, president of the American Uro-

logical Society, and professor of urology at the University of Southern California College of Medicine.

Woodbury County

The Woodbury County Medical Society held its last business meeting until next fall May 26 at the Martin Hotel, Sioux City. Reports of the legislation, school health and cancer control committees, and other groups, were heard and the proposed health insurance program was discussed.

The regular meeting was held June 23 at the Mayfair Hotel, Sioux City. Dr. William Bennett Bean, head of the Department of Internal Medicine, at the State University of Iowa College of Medicine, spoke on "Diagnosis and Treatment of Jaundice."

PERSONALS

Dr. Carroll O. Adams, of Mason City, gave an address on socialized medicine before his fellow Kiwanians on May 12 at Hotel Hanford, Mason City.

Dr. Nathaniel G. Alcock spoke on socialized medicine at the meeting of the Mercy Hospital Auxiliary June 1 in Iowa City.

Dr. Walter L. Bierring attended the Seventh International Congress on Rheumatic Diseases, held in New York City May 31 to June 1. He spoke at the Congress on the subject of "Rehabilitation of Arthritis and Allied Diseases."

Dr. Albert D. Blenderman, of Paullina, gave "The Doctor's Viewpoint on Socialized Medicine" before his fellow Lions Club members at a meeting May 23.

Dr. William J. Brown, Jr., a native of Cedar Rapids, has become associated with Dr. David F. Weaver in Davenport. Dr. Brown was graduated from the State University of Iowa College of Medicine in 1943 and served his internship at Wesley Memorial Hospital, Chicago. He was with the army medical corps for three years, including duty in Burma. His residency in pediatrics was spent at Chicago Municipal Contagious Disease Hospital, Buffalo Children's Hospital, Buffalo, N. Y., and Children's Memorial Hospital, Chicago.

Dr. Richard V. Daut, of Davenport, has been elected to membership in Sigma Xi, national honorary scientific society.

Dr. Arthur W. Erskine, of Cedar Rapids, was named president of the American College of Radiology at its annual meeting in Atlantic City on June 5.

Dr. Rubin Flocks, of Iowa City, spoke May 18 to the Iowa City Lions Club on socialized medicine.

Dr. Paul From, who is associated with Dr. Louis Goldberg in Des Moines, has begun to practice also in his home town, West Des Moines.

Dr. William S. Gladstone, who has been in general practice in Iowa Falls with Dr. E. J. Steenrod for the past year, left there on July 1 for the State University of Iowa to take a special three year course in pathology and radiology.

Dr. Henry A. Gray, of Keokuk, was elected president of the Alumni Association of the Keokuk Medical College at the group's first postwar reunion June 13.

Dr. Irving J. Hanssmann, of Philippi, W. Va., has become a member of the staff at the Cogley Clinic in Council Bluffs, where he will be associated with the department of internal medicine. A graduate of New York University Medical College, Dr. Hanssmann has been on the staff of the Myers Clinic in Philippi for the last two years.

Dr. John C. Hastings, of Elma, was honored by his community with a program and picnic dinner June 19. He has announced his retirement due to ill health.

Dr. M. D. Hayden, a native of Humboldt, has become a partner of Dr. M. F. Joynt in Marcus. Dr. Hayden was graduated from the State University of Iowa College of Medicine in 1946 and, after joining the navy medical corps, served his internship at the Marine Hospital in Camp Pendleton, Calif. He comes to Marcus from his service with the navy.

Dr. Jonathan J. Johnson, who has practiced at Alden for nearly 45 years, will be honored by his entire community July 3. The day will be known as "Dr. Johnson Day."

Dr. Merl A. Kadel has returned to Laurens after practicing in Lake Park for five months.

Dr. Herbert Kersten, of Iowa City, spoke on socialized medicine at a meeting of the Residents' Wives Club on May 26.

Dr. Robert J. Kurth has opened an office in Waterloo for the general practice of medicine and surgery. A native of Waterloo, Dr. Kurth was graduated from Creighton University School of Medicine, Omaha,

Neb., in 1946 and served his internship in St. Luke's Hospital in Chicago. After practicing for 15 months at Dike, he has been with the Lenant-Peterson Clinic in Virginia, Minn., as assistant in the department of obstetrics and gynecology for a year.

Dr. Horace M. Korn, of Dubuque, took part in a symposium on diseases of the heart and lungs conducted by the University of Wisconsin School of Medicine and the Wisconsin State Board of Health, at Madison, Wisc., June 20 to 22.

Dr. Carl H. Matthey, of Davenport, gave a talk on health to mothers of children entering kindergarten next fall at a program sponsored by the P.T.A. and held May 26.

Dr. Harold W. Morgan, of Mason City, spoke on socialized medicine to the Lions Club there on May 18 and to the Garner Rotary Club on May 23.

Dr. Don O. Newland, who has been associated in Belle Plaine for the past year and a half with his father, Dr. Don H. Newland, and Dr. Norman C. Knosp, in the Corn Belt Hospital, has accepted a position as resident surgeon at the University of Arkansas Hospital, Little Rock, Ark., effective July 1. While at Little Rock, Dr. Newland will study advanced medicine and surgery in the University School of Medicine.

Dr. Herbert Pease, who has practiced in Alta Vista for about eight years, is retiring from practice there due to ill health. Dr. and Mrs. Pease plan to go to San Diego, Calif.

Dr. Arlo L. Pitcher has become associated with Drs. Samuel P. Leinbach and Glen J. Hruska in Belmond, effective July 1. Born of American parents in Canada, Dr. Pitcher was graduated from Queen's University Faculty of Medicine in Ontario, Canada, in 1943. He served his internship at the New York Polyclinic Hospital in New York City. For two years he was assistant resident on surgery at the Hospital of the Long Island College of Medicine in Brooklyn, N. Y., and for the past three years and three months has been chief surgical resident at the Garfield Memorial Hospital in Washington, D. C.

Dr. Sam Savre, who has practiced in Osage for 41 years, has announced his retirement. Dr. Robert Isham, who came to Osage four months ago and has been in partnership with Dr. Savre, has purchased his office building, equipment and practice.

Dr. Siegmund F. Singer, of Ottumwa, was elected to fellowship in the American College of Radiology at its meeting June 5 in Atlantic City, N. J.

Dr. Leslie W. Swanson, of Mason City, discussed socialized medicine at a meeting May 24 of the Wa-Tan-Ye Club there.

Dr. Robert E. Tinley, Council Bluffs physician since 1937, has leased a new 15-bed hospital at Denver City, Texas, with another physician. They will take over the practice there in July.

Dr. George L. Wadsworth, superintendent of the Woodward State Hospital and School, has withdrawn his resignation which was submitted March 28.

Dr. Edward A. Watson, who has been associated with the Steele Memorial Hospital since March 1946, has severed his connections there, effective June 1.

The selection of a four-man medical board to share the duties at Pine Knoll Sanitarium in Davenport was announced June 9. Dr. L. V. Schroeder, of Walcott, will serve as medical director and as chairman of the board. Other members, all of Davenport, are Dr. F. Dale Wilson, surgical consultant; Dr. Harry B. Weinberg, medical consultant; and Dr. Harold J. Evans, tuberculosis consultant.

DEATH NOTICES

Hayek, John M., 47, of Des Moines, died May 24 at the Iowa Methodist Hospital, following a cerebral hemorrhage. Dr. Hayek, director of the Division of Maternal and Child Health of the Iowa State Department of Health for 10 years, joined the department in 1936 after having practiced at Cedar Rapids for eight years. He was graduated from the State University of Iowa College of Medicine in 1926. He was a member of the Polk County and Iowa State Medical Societies.

Shaw, Mathew McKnight, 73, died May 16 at his home in Madrid, having had an operation a few weeks previously for a malignant growth. Born in Monroe, Dr. Shaw was graduated from Drake University College of Medicine in 1905. He located in Madrid immediately thereafter and continued to practice there until his death. He was a member of the Boone County and Iowa State Medical Societies.

Thornell, Joseph B., 60, of Council Bluffs, died May 20 at a local hospital as a result of cancer. Born at Sidney, he was chemist and bacteriologist in charge of the purification plant of the Council Bluffs city water system for about 15 years before entering the field of medicine. He was graduated from the University of Nebraska College of Medicine in 1926 and served his internship at the Jennie Edmundson Hos-

pital, after which he began his practice in Council Bluffs. He was a member of the Pottawattamie County and Iowa State Medical Societies.

Williams, E. Marsh, 79, of Oskaloosa, died May 17 at the Mercy Hospital after an extended illness. Born at Lake Mills, Wisc., Dr. Williams was graduated from the St. Louis University School of Medicine in 1910. When he came to Oskaloosa in 1912, he was appointed to the State Board of Health, and under his guidance the Iowa Public Health Plan was adopted, births were recorded, and the first state-wide health program was started. He was also instrumental in setting up a public health program in Oskaloosa. He was a life member of the Mahaska County and Iowa State Medical Societies.

COLLEGE OF MEDICINE CLINICOPATHOLOGIC CONFERENCE

(Continued from page 302)

Palmer also made a special study of the most recent 101 cases, all of which were followed for three or more years. Of these 30 per cent died, 45 per cent remained hypertensive, and 25 per cent had normal or near normal blood pressures. Among 100 control cases (some of whom had undergone treatment with potassium thiocyanate), a sustained fall of blood pressure to normal or near normal was achieved in only 12 per cent. In summary, Palmer observed, "When the favorable effect of operative intervention is critically evaluated, there has been a diminishing return of favorable results the longer the patients are followed. Nearly 70 per cent appeared to be benefited soon after operation, but, as experience grew with them, this percentage declined to 25 per cent. But this effect of 25 per cent has been obtained twice as frequently in the series by surgical means as by a careful medical regime and was obtained in patients with malignant hypertension whose blood pressures were unaffected by medical management. From this experience, sympathectomy is regarded as the treatment of choice for malignant hypertension, certainly for groups 1 and 2, and probably also for group 4."

Exercising the general principles outlined above, we attempted to relieve the patient who is the object of our study today. He appeared to meet all necessary criteria for sympathectomy. In addition, on the basis of the previous negative abdominal exploration, it seemed reasonable to exclude pheochromocytoma, a Goldblatt type of kidney, and polycystic kidney disease. Therefore, operation was undertaken on the left side. It was during this procedure that marked excursion of blood pressure occurred. This simulated closely the episode which took place during the previous operation on the gallbladder.

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SARCOIDOSIS

Walter H. Nadler, M.D., Chicago

Cutaneous manifestations of sarcoidosis were described almost 75 years ago, and their histologic appearance, thought to be suggestive of sarcoma, was reported by Boeck 50 years ago. That the disease is a generalized one has been known since 1915, and for a quarter of a century involvement of the uvea and the parotid glands has been recognized as a part of the varied clinical picture. Hunter,¹ in presenting the history of a patient who seemed to have made a clinical recovery after four and a half years, commented in 1936 that the protean manifestations of sarcoidosis were then not widely appreciated. Longcope,² in 1941, compiled data on 31 patients, including necropsy findings on 4 cases. Since that time it has become apparent that the disease is relatively common, and that it is world-wide in distribution, affecting either sex, all races, and individuals of any age. Nevertheless, although more than 1,000 cases have been reported, and the literature on the subject has become voluminous, the disease is still often unrecognized and is sometimes wrongly diagnosed because of lack of corroborative histologic evidence.*

Case Reports

The following review of the histories of 5 patients with proved sarcoidosis illustrates the protean manifestations, the widespread lesions, and the usual relatively benign character of this chronic disease:

Case 1. Mrs. M.M., age 35 years.

A tumor in the left upper quadrant was noticed by the patient in January 1948. Six months later she sought medical advice because of fatigue, tachycardia, and loss of 15 pounds in weight. Slight anemia, an increased sedimentation rate, a

palpable liver, and a spleen so large that Banti's disease was suspected, were noted. Hospital observation in September revealed almost daily slight fever, slight anemia, a palpable liver and marked splenomegaly. There was no adenopathy. Roentgenograms of the chest were normal, as were those of the bones of the hands, femora and skull. Sternal puncture showed a normal, hypercellular marrow. Tuberculin and brucellergen skin tests were negative. Total blood protein was 7; albumin-globulin ratio, normal. Cephalin flocculation test was positive. Sternal biopsy revealed lesions described as "eosinophilic granulomata compatible with a diagnosis of Schüller-Christian or Gaucher's disease."



Fig. 1. Multiple Sarcoid Lesions in Spleen of Case 1.

A splenectomy was performed on Nov. 10, 1948, because of the great size of the spleen and because of evidence, slight but suggestive, of hypersplenism. The cephalin flocculation test had become negative after rest and dietary treatment. The spleen weighed 1,320 gm., and its surface contained coarse nodules; section showed many circumscribed, nonconfluent granulomatous lesions characteristic of sarcoidosis. (Fig. 1.) The splenic hilar nodes contained similar lesions. The liver was moderately enlarged with slight, irregular spotting on the surface. Sections of the liver showed nodules similar to those in the spleen: varying amounts of thick, densely hyalinized, con-

*In one of the large hospitals in the Chicago area the diagnosis of sarcoidosis was recorded only nine times between 1932 and 1944, while, since 1944, 23 patients have been believed to be afflicted with this disease. The diagnosis was confirmed by biopsy in only 16 of the 32 cases.

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nective tissue fibers transected the lesions. Guinea pigs injected with emulsions from the spleen failed to develop tuberculosis. Four months after splenectomy, on a regimen of rest, high protein and carbohydrate diet, and accessory vitamins, the patient had gained weight and strength and had no subjective symptoms.

In this patient the spleen was the major organ involved. Splenic lymph nodes and the liver were also affected. Even though roentgenograms of the bones were negative, the sternal marrow contained lesions. There was no clinically demonstrable involvement of the superficial lymph nodes, lungs, mediastinum, skin or eyes.

Case 2. Mr. F.W., age 38 years.

Hospital studies were made on this patient in May 1942. He had complained of weakness for several years and suffered with anemia that did not respond to treatment. Cervical and inguinal lymph glands were palpable, as were the liver and the spleen, which was felt 2 or 3 finger breadths below the costal margin. Chest films showed a decreased transparency of both lungs, caused by granular and mottled shadows; mediastinal shadows were within normal limits. Red blood count was 2.3 to 3.8 million; hemoglobin, 7 to 9 gm.; white blood count, 3,450; platelets, 170,000. Prothrombin time was normal. Blood protein was 7.89 and albumin-globulin ratio, 3.94 to 3.95. Slight icterus was noted on several occasions, and quantitative van den Bergh tests showed hyperbilirubinemia (2.7 and 3.6 mg.) There was no increased fragility of erythrocytes. A diagnosis was made of acquired hemolytic icterus; an associated slight hypersplenism was suspected.

The spleen was removed on July 6, 1942; it weighed 906 gm. The surface of the spleen, and of the liver as well, was studded with small, white, elevated lesions which lay immediately below the capsule. Sections of the spleen and liver biopsy showed lesions described as "conglomerate tubercles in the histologic stage." A few tubercles were reported to show central areas of necrosis, some of which had a hyaline appearance. A histologic diagnosis of tuberculosis was made at the time. Recently, however, a study of freshly made sections resulted in a change of diagnosis to sarcoidosis. Six months after splenectomy the patient's condition was reported greatly improved.

This case was, in 1942, wrongly diagnosed as tuberculosis because of unfamiliarity with the total clinical picture of sarcoidosis. The spleen and the liver were involved, and it may be presumed that the lungs and peripheral lymph nodes were also affected.

Case 3. Mrs. G.S., age 60 years.

This patient was admitted to the hospital in

July 1947 because of a loss of 25 pounds in weight in the past 10 months, and dyspnea and sweats following pneumonia four months previously. She had a low grade fever, a moderate macrocytic anemia (red blood count, 3.47 million), and a palpable spleen. There was no adenopathy. Chest films showed an area of clouding with rather indefinite borders, approximately 1 by 2½ cm. in size, in the right second interspace. Brucellergin, tuberculin and coccidiodin skin tests were negative. Sternal bone marrow biopsy showed, scattered throughout the marrow tissue, at least eight well defined granulomatous lesions centered around typical giant cells of Langhan's type.

The spleen, removed on Aug. 9, 1947, weighed 390 gm. Sections showed merely follicular and reticulo-endothelial hyperplasia and fibrosis. Guinea pigs inoculated with spleen tissue, as well as animals previously injected with gastric washings, failed to develop tuberculosis. Following splenectomy, this patient remained in poor health. She was readmitted for observation a year later, in August 1948, complaining of fatigue, slight cough, dyspnea on exertion, and acute skin lesions which proved to be herpes zoster. The preceding April she had had a bilateral uveitis. There was no fever. A Mantoux test was negative. Chest films showed infiltration in both lower lung fields. Red blood count was 2.6 million; hemoglobin, 8.5 gm.; sedimentation rate, elevated. Total blood protein was normal (6.24 gm.), as was the albumin-globulin ratio.

This patient is a chronic invalid. Sarcoidosis was demonstrated by sternal bone marrow biopsy. There evidently is lung involvement, and there have been uveal lesions. The spleen, which was removed, was slightly enlarged but showed no granulomata.

Case 4. Mrs. M.C., age 45 years.

This patient entered the hospital because of bilateral iridocyclitis. In the right eye, vision had been impaired for one year and an iridectomy had been performed because of increased intra-ocular tension. A productive cough had been present for 17 years. Loss of 20 pounds in weight, fatigue, and skin lesions had been noticed in the past year. The face, chest, back, and extensor surface of the arms showed papulosquamous, slightly scaling, nonindurated lesions. Temperature was normal. There was no significant adenopathy. The spleen was barely palpable. Lung findings were vague, but roentgenograms showed the multiple sub-apical and lower lung field shadows which had been found a year previously. Sputa contained no tubercle bacilli, and pooled gastric washings did not produce tuberculosis in guinea pigs. Tu-

berculin and brucellergin skin tests were negative. Roentgenograms of the hands revealed no bone changes. Biopsy of the skin showed granulomata characteristic of sarcoidosis. The patient was discharged after 11 days.

On readmission eight months later in June 1948, the patient was seriously ill as the result of treatment with calciferol and dihydrotachysterol, begun in January and renewed a month before admission. She had abdominal tenderness and ileus. The blood calcium level was 16.8 mg. per cent, and the blood urea nitrogen, 42.4 mg. The patient was acutely ill with fever which continued for eight days. There were symmetric, brownish discolored areas, slightly depressed in the center, on the flexor surfaces of the upper extremities and a few on the thighs. Small axillary and inguinal glands were palpable. Vision was worse because of superficial band-shaped keratitis with calcium deposits which required bilateral partial keratectomy.

In this patient there was apparently involvement of the lungs and uvea in addition to the skin, biopsy of which made possible the diagnosis of sarcoidosis. Whether the palpable spleen and small lymph nodes were affected was not proved. Calciferol and dihydrotachysterol had produced an alarming intoxication with hypercalcemia and nitrogen retention; these drugs were responsible for a keratitis which required surgical removal of calcium deposits.

Case 5. Mr. L.C., (colored), age 32 years.

This patient had subcutaneous discrete nodules in the outer portion of his eyelids, on the right side of the neck, and on the inner aspect of the right arm, left forearm, right thigh, and left leg. The parotid glands were enlarged and nodular on palpation. No enlargement of the liver or spleen was detected. Chest films showed bilateral hilar lymph and right peritracheal adenopathy; scattered throughout both lung fields were mottled areas of density, and radiating from the hila were similar areas of density. Roentgenograms of the hands and skull were normal. Sputum contained no tubercle bacilli, and guinea pigs inoculated with gastric washings remained healthy. Sternal puncture revealed normal marrow. The total blood protein was 6.92 and the albumin-globulin ratio, 3.86 to 3.06. Biopsy of an epitrochlear and of an inguinal lymph node disclosed sarcoid lesions. Treatment with streptomycin for nine weeks was of no demonstrable benefit.

In this case, in addition to the lesions demonstrated in superficial lymph nodes, sarcoidosis evidently affected the lungs and parotid glands as well.

The Sarcoid Lesion

Although sarcoidosis may appear to be limited to one or two small areas, and maximum involvement is apt to be confined to one or merely a few organs, widespread dissemination of lesions is the rule. Lesions have been reported, at one time or other, in almost every organ of the body. The extent of involvement may not be immediately evident. The marrow of bones that are roentgenologically normal may, for example, be found to contain typical epithelioid tubercles. (Cases 1 and 2.) In exacerbations of the disease, organs previously believed free of lesions become manifestly affected. Fisher,⁴ in 1947, reported the following localizations in a series of 94 cases: lungs or mediastinal nodes, 83 per cent; lymph nodes, 73 per cent; eyes, 44 per cent; spleen, 20, and liver, 19 per cent; nervous system, 13 per cent; heart, 9.6 per cent, and kidneys, 5.3 per cent. Although sarcoidosis is usually benign, death may occur when vital structures are invaded. Scotti and McKeown,⁶ in reporting a case of sudden death due to myocardial involvement, reviewed 12

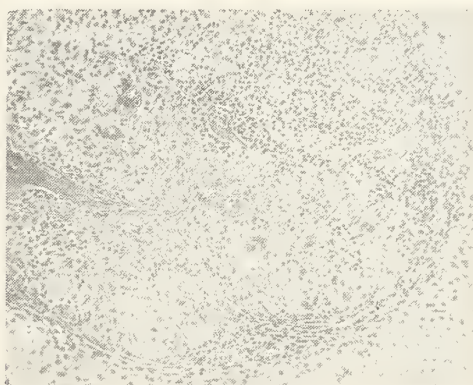


Fig. 2. Groups of Epithelioid Tubercles in Liver, from Biopsy Material, Case 1.

other cases in which autopsies had been made and found that death had occurred suddenly in two of them as the result of myocardial lesions.



Fig. 3. Giant Cells in Tubercle Surrounded by Fibrous Tissue from Liver Biopsy of Case 1. Absence of caseation is characteristic.

The typical sarcoid lesion (Figs. 2 and 3) consists of a mass of noncaseating tubercles, usually occurring in large numbers; sometimes, however, only a few tubercles are found. The epithelioid tubercles show little or no necrosis; they often contain refractile or apparently calcified bodies in the giant cells. Replacement may occur by fibrosis and by hyalinization. No evidence can be found of bacteria, tubercle bacilli or fungi. The histologic picture is, unfortunately, not always typical, notably in the bone marrow. Sarcoid lesions, indistinguishable from those of sarcoidosis, may be found in tuberculosis, syphilis, leprosy and lymphogranuloma venereum, and may be produced by beryllium poisoning. Accordingly, a diagnosis of sarcoidosis may not be made solely on the histologic demonstration of sarcoid lesions. But, when this disease is suspected on clinical grounds, sections are indispensable in establishing a diagnosis.

Symptoms

The symptoms are extremely variable as might be expected. That the symptoms are usually mild is remarkable and characteristic. Presenting symptoms may be malaise, weakness and loss of weight. Cough is common when there are lesions in the lungs or mediastinal glands. Slight fever is often present. Examination reveals evidence of involvement of one or more of the following: lungs, lymph glands, eyes, skin, spleen, liver and bone. Anemia is common; the sedimentation rate may be elevated; transient eosinophilia may occur. The blood serum globulin is apt to be increased; this was noted in 2 of the 5 patients (Cases 2 and 5) which have been described and in 50 per cent of 68 cases reported by Fisher. Some patients have been found to have an increase in blood calcium and some, an increase in phosphatase activity of the serum.

The disease is chronic and may persist for many years. The lesions tend to regress, but relapses are common. Many patients apparently recover completely; others become and remain free of symptoms, even though complete cure is unlikely. On the other hand, chronic invalidism may occur. Death may follow directly and suddenly as the result of extension into vital tissues such as the heart muscle and pituitary gland, or, indirectly, from heart failure when there is chronic extensive and progressive lung damage. Although symptoms in sarcoidosis may be few or mild, the disease is only relatively benign. The mortality rate is comparatively low (6.3 per cent in the series of cases reported by Fisher).

Diagnosis

Patients with sarcoidosis are encountered by the general practitioner, the internist, the ophthalmol-

ogist, the dermatologist, or by the roentgenologist, who in routine chest films may find abnormal shadows in the lung or mediastinum. Recognition of the disease is important, not least from the standpoint of prognosis. The diagnosis is sometimes easy, as when the condition is suspected because of the involvement of a number of structures, and biopsy of lymphatic glands, skin, or bone marrow reveals typical sarcoid lesions. The diagnosis is difficult when few tissues are involved, when sarcoidosis is not thought of, when tissue removed for microscopic examination reveals no lesions, or when atypical lesions are found. Detection is easier when many organs are involved. For example, if a patient has iritis, lymphadenopathy, splenic enlargement and roentgenologic evidence of pulmonary disease, the possibility of sarcoidosis should certainly receive consideration, and a search for sarcoid lesions should be made by biopsy of a lymph gland or bone marrow. Prolonged clinical observation may at times be necessary before an accurate diagnosis is possible.

Diagnosis demands both a clinical picture compatible with sarcoidosis and the demonstration, histologically, of sarcoid lesions. Since granulomata indistinguishable from those of sarcoidosis may be present in various infections, including tuberculosis, and may be produced in the lungs by irritants such as beryllium, it is necessary to attempt to exclude such conditions. Tuberculosis cannot be demonstrated in the majority of patients with sarcoidosis, but active tuberculosis may coexist in patients who have lung involvement; when it does, the difficulty of making a diagnosis of sarcoidosis is greatly increased, if not impossible. The differential diagnosis of sarcoidosis obviously requires consideration of a large number of disease states, ranging from tuberculosis and fungus infections of the lungs to Banti's disease.

The intradermal test described by Kveim, in 1941, may become of diagnostic value if standardized antigenic material becomes available. Prepared as is the antigen used in the Frei test for lymphogranuloma venereum, material from sarcoid lesions produces in most patients with active sarcoidosis a slowly developing chronic lesion which histologically presents the characteristics of sarcoidosis. Nelson⁶ has reported that the test is not invariably positive, and that similar lesions may be produced in sarcoidosis patients by the intradermal injection of normal human spleen tissue.

Etiology

Most features of sarcoidosis are, as stated by Freiman, consistent with those of a chronic infection which has a special predilection for tissues

of the reticulo-endothelial system. The condition was originally considered a manifestation of an attenuated type of tuberculosis, and this view is still held by some writers. That certain components of the tubercle bacillus may produce not only sarcoid lesions, but also fibrous changes such as occur in myelofibrosis, is recognized, as is the fact that pulmonary tuberculosis may coexist with sarcoid lung pathology. Most patients with sarcoidosis, however, present no signs whatsoever of tuberculosis in sputum or in skin tests. Guinea pigs inoculated with sputum, gastric washings, or sarcoid material fail to develop tuberculosis, and special staining of lesions reveals no tubercle bacilli. In fact, no fungi nor bacterial organisms of any kind are found in sarcoid tissue. Also suspected as possible causative agents have been *Brucella* infection and virus infection. Recent studies suggest that multiple causes may be responsible, that the sarcoid lesion may be a tissue reaction or response to various foreign bodies or phospholipids. Such substances as silica and beryllium are capable of producing lesions in the lung, and various micro-organisms seem able to produce generalized epithelioid tubercles of this type. The cause of sarcoidosis is still unknown.

Treatment

No specific therapeutic agent has been found. None of the many measures that have been used, including streptomycin, have had an appreciable effect. Remissions and healing, which tend to occur spontaneously, seem to be favored by rest, a diet that is balanced and high in caloric value, and accessory vitamins. Ultraviolet light has been reported as beneficial. These simple measures appear to be as effective as any. Calciferol and dihydrotachysterol⁷ have been used in the hope of aiding the removal of the phospholipid believed responsible for the epithelioid cell response. They are admittedly toxic in the high dosage recommended and may, in fact, produce alarming and even dangerous reactions such as occurred in Case 4.

Summary

The protean character of sarcoidosis has been illustrated by a report of 5 patients. The etiology of this relatively common generalized disease is still unknown. Symptoms are usually mild, remissions occur spontaneously, and recovery is frequent. Exacerbations may, however, lead to invalidism and even cause death. Detection of the disease is important, particularly from the standpoint of prognosis. Diagnosis requires the demonstration, histologically, of sarcoid lesions in patients who present the clinical features of sarcoidosis.

BIBLIOGRAPHY

1. Hunter, F. T.: Hutchinson-Boeck's disease (generalized "sarcoidosis"); historical note and report of case with apparent cure. *New England J. Med.*, cxiv:346-352 (Feb. 20) 1936.
2. Longcope, W. T.: Sarcoidosis, or Besnier-Boeck-Schaumann disease. Frank Billings lecture. *J.A.M.A.*, cxvii:1321-1327 (Oct. 18) 1941.
3. Michelson, H. E.: Sarcoidosis, review and an appraisal. *J.A.M.A.*, cxxvi:1034-1038 (April 17) 1948.
4. Fisher, A. M.: Sarcoidosis. *The Chest and the Heart*, edited by Myers, J. A., and McKinley, C. A.; Charles C. Thomas, Springfield, Ill., 1948, vol. i, p. 609-622.
5. Freiman, D. G.: Medical Progress: Sarcoidosis. *New England J. Med.*, cxxxix:664-671 (Oct. 28) 1948; and cxxxix:709-716 (Nov. 4) 1948.
6. Scotti, T. M., and McKeown, C. E.: Sarcoidosis involving the heart; report of case with sudden death. *Arch. Path.*, xlv:289-300 (October) 1948.
7. Nelson, C. T.: Observations on Kveim reaction in sarcoidosis of American negro. *Invest. Dermat.*, x:15-26 (January) 1948.
8. Curtis, A. C., and Grekin, R. H.: Sarcoidosis III: A Review. *Clinics North America* (Chicago), 31-54 (January) 1949.

THE TREATMENT OF DIABETES

George B. Crow, M.D., Burlington

The treatment of diabetes is a major and urgent problem. Joslin estimates there are one million diabetics in this country, and recent spot surveys by the American Diabetes Association indicate there may be as many more undiscovered cases. In addition, there must be even more prediabetic persons. This presentation is an appeal for more doctors to aid in the solution of this problem.

The control of most cases of diabetes is not difficult, but it is a lifetime job for the individual if he is to live as long and as well as he should. There is now abundant evidence that diabetics properly treated before the onset of serious complications can function almost as well as the non-diabetic. But in order to do this their diabetes must be brought under control and they and their families taught how to keep it under control. As said before, this is not difficult for most cases, but it does call for the expenditure of considerable time and effort on the part of both the physician and patient, particularly during the necessary preliminary training period.

Now what is meant by diabetic control? All agree that acidosis must be prevented, for acidosis is the precursor of diabetic coma, the only direct cause of diabetic deaths. Perhaps we should pause here to review the causation of diabetic coma. During my early years in medicine we had no help to offer the diabetic. If their diabetes came early in life, we knew that death would claim them in a year or so. If their diabetes came late, they might live several years. Most of both groups died in coma, although in the older group a considerable number succumbed to the complications incident to accelerated vascular disease. How were those cases treated?

Believing diabetes was due simply to defective carbohydrate metabolism, we cut carbohydrate to a minimum. In our ignorance of the related role of carbohydrate metabolism to that of protein and fat, we allowed the patient to eat protein and fat as desired. Many of these patients promptly developed coma and died, and we wondered why. We now know what hastened such deaths and how to prevent them.

At about the time Banting and Best discovered insulin, Woodyatt and Shaffer published their concept of the ketogenic-antiketogenic ratio, a concept of tremendous importance, for from that concept came the evolution of rational diabetic diets. This concept showed us how ketosis (diabetic acidosis) occurs. Briefly, it is this: 100 gm. of carbohydrate metabolizes to 100 gm. of glucose; 100 gm. of protein is converted or convertible into 50 gm. of glucose and 50 gm. of fatty acid; 100 gm. of digested fat equals 10 gm. glucose (or glycerol) plus 90 gm. of fatty acid. Fatty acid cannot be burned unless glucose is burning with it. In other words, glucose is the fire that burns the fatty acid. There is a fairly definite ratio of combustion; 1 gm. of glucose is needed to burn $1\frac{1}{2}$ gm. fatty acid. This is called the antiketogenic-ketogenic ratio. This varies somewhat, particularly in severe diabetes where the ratio of glucose needed for combustion is greater. Improperly burned fatty acid results in the formation of the ketone (or acetone) bodies, diacetic acid, acetone and B-oxybutyric acid, the poisons which produce coma. But glucose does not burn alone. It requires the spark from insulin to light the fire. So insulin must be present in sufficient amount to burn the more readily combustible glucose, and this, in turn, to consume the less combustible fatty acid. So our primary object is to provide a diet containing enough antiketogenic glucose to burn the ketogenic fatty acid, and to give insulin, when needed, to insure their combustion.

Now what other controls are needed? Is it necessary or advisable to keep the urine sugar-free and the blood sugar at, or near, normal levels? Some European schools allow a free diet and give insulin in presumably sufficient doses to prevent acidosis, with little attempt made to keep the urine sugar-free. Henry J. John, of Cleveland, allows a free diet, omitting only sugar, pastries and sweet drinks. No doubt many patients will feel well and function adequately on such partial control. This is the easy method, but is it the best method? Most American physicians believe we should aim at keeping the urine sugar-free and the blood sugar at normal levels. Elliott P.

Joslin, who has successfully treated more diabetics than anyone, believes it. This belief was also voiced at a panel discussion on diabetes held in New York City on April 1, 1949. This panel consisted of Randall Sprague, of Rochester, Minn.; Arthur Colwell, of Evanston, Ill.; Jerome Conn, of Ann Arbor, Mich.; Alexander Marble, of Boston, Mass.; and Franklin Peck, of Indianapolis, Ind. All agreed that control should be our aim. Their argument for control is that the aim in treating all disease is to attain and maintain, so far as possible, normal physiology. Sugar in the urine, with elevated blood sugar, is abnormal. In uncontrolled cases the islet cells are constantly overstimulated. This overstimulation leads to fatigue of the cells, with less and less output of insulin, and sometimes to permanent damage. Conversely, control allows the islet cells to rest, resulting in an increased insulin output. This often permits gradual reduction in the dose of insulin and not infrequently its complete omission. Some diabetics get worse when not properly controlled. It is generally held that degenerative changes, especially in the blood vessels, occur earlier and more extensively in uncontrolled cases. Jackson and O'Brien, at the State University of Iowa, found that adequate control favors a reversal of retinal damage resulting from diabetes in children. Reduction in dose, or discontinuance, is rarely possible in uncontrolled cases. All agree that some cases require a compromise. Cardiacs and elderly people liable to cardiac accidents should not be kept entirely sugar-free if they develop frequent mild, or even occasional severe, insulin reactions. The so-called "brittle" cases cannot be kept under complete control without frequent severe insulin reactions. In these cases, however, partial control, attaining one negative specimen a day over a prolonged period, often lessens or overcomes "brittleness."

How is control to be gained and maintained?—by diet, by insulin when needed, and by properly regulated exercise.

Long before the discovery of insulin, Allen gave us the first great advance in the treatment of diabetes, viz., the proof that the controlled diabetic need not die of his disease. He proved that many cases could be controlled by a diet low in all food elements, the so-called "starvation diets." Those of us who went through the "Allen Era" know it can be done, but most of the patients on the "starvation diet" had to be kept at such low nutritional levels that they could do little or no work, and many felt that living under such conditions was hardly worth the effort. A few had the fortitude to persevere until the discovery of

insulin gave them deliverance. And what a great deliverance it was. They no longer needed starve but could have sufficient food to regain their lost weight and strength, to live and work, and to enjoy life again.

So now we give diabetics sufficient food for body needs, taking into consideration age, weight and the kind of work they do. Those who do hard physical work obviously must have more than those less active require. Older people nearly always decrease their activities and hence need less food. Children need much more than adults in proportion to weight in order to provide for greater activity and growth. Fat is an enemy of the diabetic, so the overweight must be brought to normal weight. Those who have become underweight as the result of diabetes or other diseases should be brought to normal. Those who are normally somewhat underaverage weight and who feel and function well at such weight need no change.

Now that we have set down the general rules for diet, what are the specific needs for a specific patient and how should we proportion the food elements, carbohydrate, protein and fat? First, what are the caloric needs? We believe, with Joslin, that caloric needs are not as great as many nutritionists advocate. We believe this because long experience has proved it. We start on the basis of 30 calories per kilo of body weight for the average individual doing light to moderate work. A patient weighing 130 pounds would get 1,800 calories; 150 pounds, about 2,100 calories; and 180 pounds, 2,200 to 2,500 calories. In the 180 pound group are found more overweight patients, hence the greater variation in diet allowance. These allowances may be varied for each group according to the general rules above mentioned. Our lowest carbohydrate allowance is 150 gm., unless sharp weight reduction is indicated (this applies mostly to inactive patients), and our highest carbohydrate allowance is 240 gm. We have few patients on 240 gm. of carbohydrate. Patients who do hard work and cannot hold satisfactory weight and strength on the above diets are given somewhat more fat. This can be done safely because, as you will note presently, all our present diets allow a wide margin of antiketogenic over ketogenic factors. We may insert here that a 10 year old needs about the same as a moderately active 130 pound adult.

Let us now consider the amounts and proportion of carbohydrate, protein and fat that make up the above diets. In doing so, we follow fairly closely the Joslin pattern. Most nutritionists agree

that the body needs 1 to 1¼ gm. of protein per kilo of body weight. That has long been considered basic, so we have only to consider the relative amounts of carbohydrate and fat. For some time following the discovery of insulin and the antiketogenic-ketogenic ratio, the usual rule was a low carbohydrate, high fat diet, allowing just enough carbohydrate to keep the ratio of 1 gm. glucose to 1½ gm. fatty acid. Still overawed by the role of carbohydrate, we kept it as low as possible and still avoid ketosis. On such a diet patients were successfully controlled so long as no appreciable amount of sugar was lost in the urine and no infection or other trauma appeared. In either case the patient promptly showed acidosis and then required the most careful supervision to avoid coma. The latter could occur with devastating speed in the presence of severe infection or digestive disturbance. That was a serious objection to the low carbohydrate, high fat diet. Another objection was its unpalatability. This, incidentally, increased the temptation to break the diet.

Skipping the evolutionary stages, we have now arrived at a reversal of these two elements, that is, a comparatively high carbohydrate, low fat diet; and, much to our surprise, we find that such diets call for little or no increase in insulin requirements. The advantages of this diet are two-fold; it closely approaches the normal diet, and there is a much wider margin of safety as regards the antiketogenic balance. In other words, considerable sugar can spill, and over a considerable period of time, before acidosis will occur.

Following this plan, the caloric needs for the three groups mentioned above would be prescribed as follows:

<i>Carbohydrate</i>	<i>Protein</i>	<i>Fat</i>	<i>Calories</i>
For the 130 pound patient			
150 gm.	60-75 gm.	90-100 gm.	1,800
For the 150 pound patient			
180 gm.	90 gm.	110 gm.	2,070
For the 180 pound patient			
210 gm.	90 gm.	110 gm.	2,190
240 gm.	100 gm.	120 gm.	2,440

Intermediate weights may need intermediate values.

There are three types of insulin, quick acting, slow acting and intermediate. The old or regular insulin and the newer crystalline zinc insulin are quick acting (extending over a four to six hour period); protamine zinc is slow acting (extending over a 24 to 36 hour period); and globin lies between. About half of our patients requiring

insulin are controlled by protamine insulin alone, with a single dose before breakfast. (Note: our diabetics test the urine 3 times a day, before each meal. This is not the best time to test, but it is the most convenient for most patients and has proven generally satisfactory.) With a negative morning specimen and no reaction, hold the dose at that point. After a few days, if the noon and/or evening specimens show appreciable amounts of sugar, instead of increasing the protamine insulin which is apt to cause night reaction, we add a smaller dose of crystalline, usually $\frac{1}{4}$ to $\frac{1}{3}$ the protamine dose. Both doses are given before breakfast. The clear insulin should be given first. If the order is reversed, the small amount of protamine left in the syringe after injection will convert some of the clear to protamine when the former is drawn into the syringe. We do not use insulin mixtures for several reasons, but the main reason is that the proportions of protamine and clear insulin needed for adequate control vary considerably not only in different individuals but also often in the same individual over comparatively short periods of time. Our experience with globin insulin is limited. We have used it in a small number of cases of mild to moderate severity and probably will so continue. However, our results have generally been satisfactory with the procedure mentioned above, and we have been reluctant to change. A new insulin, known as NPH 50, of the intermediate type, is being tried experimentally and gives promise of filling a definite need. It is not yet available for general use.

The third factor in control is exercise. Exercise increases sugar combustion and lessens insulin needs. So we urge our diabetics to take exercise compatible with their physical capacity. This is especially important during their hospital training period. If the patient remains inactive in the hospital and goes home to much greater activity, insulin reactions often occur, unless the insulin dose is sharply cut at the transition stage. Physical exhaustion, however, raises insulin requirements and should be avoided.

But we have a diabetic patient waiting. We have excluded renal glycosuria, and the rare sugars that might be found in the urine, and the less rare lactose that is often found in the urine of nursing mothers. We have finished our academic discussion, but of what use is it to our diabetic patient? We must somehow translate the essential parts to the patient. No doctor can daily and forever supervise his diabetic patients. Treatment is a lifetime job. The patient and, when possible, another member of the family must be taught

how to manage his diabetes themselves, with some supervision by the doctor. If the diabetes is mild, for example, showing less than 4 plus urinary sugar and less than 200 mg. blood sugar one or two hours after meals, we may try considerable food reduction by the cup and spoon method for several days at his home. Perhaps 10 per cent of our cases are controlled in that way. But if the case shows greater severity, we insist on a hospital training period of 10 to 14 days, depending on the severity of the case. In the presence of infection or gangrene, the period of hospitalization is apt to be much longer. We re-emphasize the fact that diabetes will be with that patient throughout life. His entire future depends on proper control. We believe, then, that proper training of the patient is absolutely necessary, and that the extra time and money spent on such training is amply justified.

Upon admission to the hospital, the calculated diet for the patient is prescribed in grams of carbohydrate, protein and fat. Some patients are content with three meals of equal caloric value; others prefer less at the morning and/or noon meal and more at the evening meal, in such ratio, perhaps, as 30-30-40. When fairly large doses of protamine insulin are needed, 8 ounces of milk and two crackers are given at bedtime if there is a tendency to nocturnal insulin reactions. From the prescribed diet of carbohydrate, protein and fat, the dietitian makes out the menus, using one or another type of table of food values. Most tables are set up with 100 gm. as the unit. We prefer the tables put out by Thomas Groom and Company, of Boston, and prepared, I believe, by Joslin. These take 30 gm. or 1 ounce as the unit, except for fruit where 100 gm. is the unit. Patients with sufficient knowledge of fractions and percentage can be readily taught to make up their own menus. If the patient prefers to do this, however, the menus should be checked by the dietitian or doctor for possible errors until proficiency is assured. However, skeleton menus, allowing wide substitution, can be set up for the patient, so that a half-dozen such menus will allow ample diversification in the meals. The patient and preferably another member of the family (the cook included) are taught how to weigh out meals using a gram scale for solid foods and a graduate for liquids. We recognize that cup and spoon measurements are used successfully but believe that greater accuracy in diet makes for better regulation of insulin dosage; that alone justifies the few minutes extra time required in weighing. This method has another advantage in that there is less tendency for the patient to cheat on the diet. Long practice in weighing, however, makes

it possible for the patient to quite accurately estimate his diet. This allows him to eat out occasionally, or even take trips of several days duration, without serious loss of control. A properly trained floor nurse teaches this team how to test urine specimens and to read the tests. This nurse also teaches them how to measure and inject the morning dose of insulin. Except when acidosis or infection is present, requiring rapid control, all diabetics receive their daily dose before breakfast. There is no set rule for dosage. Unless the case is severe, we withhold insulin for a day or two after hospitalization. If the urinary sugar falls sharply, we wait another day or so. If sugar persists, we are apt to start with about 30 units of protamine insulin. In the presence of severe infection or acidosis, larger and frequent doses of crystalline are given.

Protamine insulin reaches its maximum effect in the second 10 to 12 hour period after administration. When the patient is on protamine insulin with a falling urinary sugar, nearly always the morning specimen is first to become sugar-free. Daily changes in dosage are rarely necessary, unless the tests show much sugar. Most patients, in time, regulate their own dosage quite well.

On admission to the hospital each patient is given a loose-leaf booklet containing some 8 or 10 pages of instructions covering essential facts about diabetes and how to control it. This booklet includes directions for urine tests, emphasizes care of the feet in elderly patients, describing symptoms and treatment of insulin reactions, etc. It also holds several ruled pages on which the patient keeps a dated record of urine tests, insulin dosage, weight, and space for recording insulin reactions or other pertinent data. When the patient leaves the hospital, his diet sheets and the table for food substitution are inserted.

Few diabetics are well stabilized on discharge; that is, considerable adjustment of insulin dosage may be necessary for several days or even weeks thereafter. Such patients report their tests by phone in the evening daily, twice weekly, or as needed, and are advised about any change in dosage. We also have them report to our office once or twice a week. For such reports we set an hour on Saturday afternoons. Each patient brings his instruction book and record and a specimen of urine. A glance at the record of urine tests and insulin dosage shows us the degree of control and needed dosage adjustment. This personal contact also gives opportunity to answer questions. Last, but not least, at these get-together meetings each diabetic becomes acquainted with the problems of his fellows and learns how to

best avoid pitfalls into which others may have fallen.

Some patients, either earlier or later, are not readily controlled. In such cases look for (1) errors in diet, (2) infections, local or general, acute or chronic, (3) acidosis, (4) hyperthyroidism or hyperpituitarism, (5) cancer, (6) liver disease, (7) severe physical or emotional strain, (8) recheck basis for diagnosis, and, as a last resort, (9) concede insulin resistance. If the diabetic does not do well, there is a reason. Look for it. Patients requiring a maintenance dose of 80 or more units of insulin call for a special search for other factors than diabetes.

The complications of diabetes, insulin reactions, resistance, and sensitivity cannot be discussed here.

This brief outline of treatment is not directed to the physician who knows diabetes and how to treat it. To him it will appear oversimplified and too dogmatic. It is directed, rather, to those who are inadequately treating this disease and to others who, I hope, may be encouraged to undertake its management. For the latter, let me assure you that it is not as difficult as it appears. A few weeks' intensive study, together with a few days' association with someone actively engaged in treatment, can give you a good start. I have always found physicians ready to share their knowledge and experience with others. Neither is it too difficult for the patient. You will be surprised at his readiness to learn and the pride he acquires in the learning. Even those children who can read and write learn their lessons quickly. To them it can become a game; for each full day of negative specimens, they have won the game.

Finally, we have indicated the magnitude of the task of locating and treating the probable two million diabetics in this country. Early discovery makes for easier control. Further, early control lessens the incidence and severity of complications. I appeal to all physicians to urge regular urine tests on their patients and to spread the need for such tests wherever possible. This need is especially great for those overweight and persons with a history of diabetes in the family. The children of diabetic parents need special supervision if they are to avoid the disease. It is your duty as physicians to help make your community diabetic conscious, for that community which is most diabetic conscious will have the least diabetic deaths.

To those physicians who may engage in this work, I assure you that the time and effort put into it will be well repaid. You will never find a more grateful or loyal group than your diabetic patients.

PANEL DISCUSSION OF DIABETES MELLITUS

Leslie W. Swanson, M.D., Mason City,
Chairman; and

Arthur G. Lueck, M.D., Des Moines,
Julian E. McFarland, M.D., Ames, and
George B. Crow, M.D., Burlington,
Discussants

Etiology and Pathogenesis

Dr. Arthur G. Lueck (Des Moines): Among the many questions asked by the newly diagnosed diabetic is one to which the physician can supply no ready answer. "What causes diabetes?", "Why do I have diabetes?" the patient queries. In reply, about all one can say is that each year the medical profession is making strides toward finding the cause of diabetes and, when it is unearthed, the cure should follow within a decade thereafter.

The first significant work on the problem was performed exactly 60 years ago, in 1889, by von Mering and Minkowski when they produced a diabetic state in dogs by removal of the pancreas. In 1922 Banting and Best again directed attention to the pancreas by extracting from it a substance which modified the diabetic state toward normalcy. They named the substance insulin. A search for some consistent pathology within the pancreas, however, failed to yield much information, so scientists began to wonder if some agent might be generated elsewhere in the body that suppressed or inactivated insulin secretion.

It is no longer supposition that insulin is the principal antidiabetic hormone, and that its source is the beta cells of the islands of Langerhans in the pancreas. Insulin is intimately associated with the ultimate chemical changes that occur in the absorbed carbohydrates, proteins and fats. Best understood is its role in the complicated reaction involved in the conversion of glucose to glycogen. This is popularly referred to as the "hexokinase reaction." It is probable that some outside influence inhibits the action of the enzyme, hexokinase, and that insulin releases it from this influence. Let us pass over the details of this reaction and proceed to a consideration of the suspected diabetogenic influence.

It is not yet proven that the causative agent does not reside in the pancreas. For instance, pancreatectomy has been performed because of carcinoma in 2 diabetic patients; in each case the insulin requirement dropped appreciably, indicating that a diabetogenic principle may originate in the pancreas itself. Such a substance has been isolated

from the pancreas, probably from the alpha cells, and from the lower stomach and the intestine.

In a paper of such limited time it is not possible to enumerate the evidence that eliminates the thyroid, the gonads and the adrenal medulla as possible sources of the diabetogenic agent. Suffice it to say that the weight of evidence points to either the anterior pituitary or the adrenal cortex as the most likely source. In 1936 Houssay¹ published the results of his experiments in dogs which tended to incriminate the anterior pituitary. He compared depancreatized dogs with a group of dogs that were hypophysectomized as well as depancreatized. The doubly operated animals developed hyperglycemia and glycosuria, but the diabetes was milder than in the control animals with only a pancreatectomy. Then, injections of anterior pituitary extract into the doubly operated animals again produced a full blown diabetic state. Shortly after Houssay's investigation, Young² intraperitoneally injected crude anterior pituitary extract daily into normal dogs and found that, by progressively increasing the quantity of extract, a permanent diabetic state resulted upon cessation of the injections. Haist, Campbell and Best³ carried the experiment further by administering large doses of insulin along with the pituitary extract; insulin prevented development of the diabetes. Conn, Louis and Johnston⁴ carried out similar studies on human volunteers. They administered a purified pituitary preparation, thought to contain mainly the adrenocorticotrophic hormone, to normal humans and produced glycosuria and diabetic glucose tolerance curves. Their daring experiment was conclusive despite the necessity of stopping short of permanent diabetes, an end which would not have justified the means.

It may be that some diabetogenic effect originating in the anterior pituitary resides primarily in the adrenal cortex. A substance has been isolated from cortical extract, 11-dehydro-17-hydroxycorticosterone, which is known as compound E of Kendall. Daily injection of this material into rats produces glycosuria, and, if the animals have been previously subtotally depancreatized, they develop permanent diabetes. The role of compound E is as yet undetermined, but it may, in some way, be the agent activated into diabetogenic activity by the adrenocorticotrophic hormone of the anterior pituitary.

Outside the laboratory there is ample clinical evidence pointing to the anterior pituitary and adrenal cortex as the glandular tissue most intimately involved in the causation of diabetes. Acromegalia and gigantism, which are manifestations of anterior pituitary hyperfunction, are accompanied by diminished carbohydrate toler-

ance; about 12 per cent of acromegaliacs have true diabetes⁵ and 36 per cent have glycosuria. Quite the opposite is found in Simmond's disease, or hypopituitarism, in which hypoglycemia and a flat glucose tolerance curve are the rule. Recently, Marzullo⁷ reported striking amelioration of diabetes in a patient who developed hypophysitis; at autopsy there was complete destruction of the pituitary. Patients with Cushing's disease, or adrenal cortical hyperfunction, characteristically show impaired carbohydrate tolerance. In the antonymous disease, adrenal cortical hypofunction, or Addison's disease, hypoglycemia is the usual finding. When a diabetic develops Addison's disease, the diabetes becomes less severe; when the Addison's disease is adequately treated with cortical extract or with compound E, the diabetes resumes its former severity.

Any discussion of the pathogenesis of diabetes raises the question of the relationship between diabetes and the well-known, associated, premature vascular lesions. Henry Ricketts⁶ philosophizes interestingly on this subject. There are three possibilities: (1) vascular disease might cause diabetes, (2) diabetes might cause vascular disease, and (3) some common factor might cause both the diabetes and the changes in the blood vessels. Here again no positive answer is forthcoming, but logic supports most strongly the contention that vascular disease follows, and therefore is probably caused by, the development of diabetes, especially in the younger age group.

Conclusion

In our search for the etiology of diabetes, paramount attention is still bound to the pancreas, for it cannot be denied that the fundamental defect of diabetes is the failure of the pancreas to supply adequate insulin for the altered circumstances under which the organ is operating. One or more of three abnormalities is present: (1) insulin secretion is subnormal, (2) body requirements for insulin are increased, or (3) insulin is rendered less effective by some agent. In the past decade the pendulum of research has swung toward the third possibility, and the search has centered upon the anterior pituitary and adrenal cortex.

BIBLIOGRAPHY

1. Houssay, B. A.: Carbohydrate metabolism (Dunham lecture). *New England J. Med.*, cexiv:971-982 (May 14) 1936.
2. Young, F. G.: Diabetogenic action of crude anterior pituitary extracts. *Biochem. J.*, xxxii:513-523 (March) 1938.
3. Haist, R. E., Campbell, J., and Best, C. H.: Prevention of diabetes. *New England J. Med.*, cexxiii:607-615 (Oct. 17) 1940.
4. Conn, J. W., Louis, L. H., and Johnston, M. W.: Studies upon mechanisms involved in the induction with adrenocorticotrophic hormone of temporary diabetes mellitus in man. *Proc. Am. Diabetes A.*, viii:215-239, 1948.
5. Grollman, A.: *Essentials of Endocrinology*, ed. 2. Philadelphia, Lippincott, 1947, p. 92.
6. Ricketts, H. T.: Problem of vascular disease in diabetes. *Proc. Am. Diabetes A.*, viii:153-169, 1948.
7. Handelsman, M. B., and Marzullo, E. R.: Pituitary disease in patients with diabetes mellitus: Case presentations. Annual Session, American College of Physicians, New York City, March 31, 1949.

Therapy and Management

Dr. Julian E. McFarland (Ames): It would probably be impossible for the four of us on this panel to agree on a definition of diabetes, let alone its therapy. Like nearly all biologic phenomena, the more one studies diabetes, the more complicated it becomes. Yet, we do manage to treat diabetes rather effectively, so perhaps there are basic philosophies about its management which make this possible, and I am going to try to elucidate one of these.

I will define diabetes mellitus as any condition of altered metabolism which results in persistent glycosuria. These conditions are varied and many, and I will not labor this point further, except to say that diabetes is no more a single disease than anemia is a single disease. Diabetes, by this definition at least, is a symptom complex which may result from many pathologic states of varying nature. There are, however, two conditions which may be set up by any diabetes which have great potentiality for harm to the patient. I will call these the acute and chronic diabetic states.

The *acute* diabetic state is that familiar picture of glycosuria, hyperglycemia, polyuria, polydipsia, polyphagia, weight loss, and ketosis which progresses to coma and death.

The equally familiar *chronic* diabetic state is accompanied again by glycosuria and hyperglycemia, also by lipemia, by progressive vascular changes, retinitis, cataract formation, etc.

It is the avoidance of these states which constitutes the chief object of diabetic therapy. I submit here that both of these states are a result of inadequate metabolism of carbohydrates, accompanied by excessive metabolism of fat and protein. Consequently, the acute and chronic diabetic states might be called the carbohydrate deficiency states, and their avoidance and correction lies basically in correcting this deficiency. To do this, one's first thought in diabetic therapy should be to supply adequate carbohydrate and, second, to be sure it is used. One must forever rid himself of the notion that carbohydrate poisons the diabetic, and that a basic part of diabetic therapy is carbohydrate restriction. If any restriction is practiced in diabetic states, it should be of fat.

The symptomatic treatment of diabetes, that is, the prevention and correction of the diabetic states, resolves itself into three divisions: namely, dietary therapy, insulin therapy, and educational and psychologic therapy, which I will take up in order.

Dietary therapy under this philosophy is very simple. The diet prescribed is exactly the same as an ideal diet selected for the same person were he not a diabetic. All the vital functions of a

diabetic are the same as those of a nondiabetic, and he needs the same food. Variations are based on the usual factors of height, weight, age, activity, health, illness, etc. The necessary factors for growth, development, energy, repair, etc., must be supplied. If he is obese, or if there is lipemia, fat is restricted. The other restriction is against sugar in concentrated form. The reason for this is in the inefficiency of our technics with insulin, not that sugar is harmful to the diabetic. The other requirement of the diabetic diet is uniformity and regularity, which must be enforced for best management.

A diet, then, first considers protein needs, well established for most people. Carbohydrate requirements are next considered and are prescribed somewhere between the minimum desirable (about 150 gm. daily) and maximum tolerable (about 300 gm. daily). The balance of the diet is of fat, restricted or unlimited according to the individual case. Obviously, attention is given to minerals, vitamins, etc. The number of meals a day is varied from three to six, and the proportionate size is varied according to the desires of the patient and the problem of insulin dosage.

Insulin therapy is aimed at assuring us that this ideal diet of the patient shall be used. One can basically do this by ascertaining that no appreciable amount of sugar is lost in the urine daily. There are other ways, but this seems to be the most practical. With several kinds of insulin, and with mixtures of two kinds, it is simply a matter of trial and error until a proper dosing method is obtained. A few basic rules help to shorten this trial and error period.

1. Begin with short-acting insulin.
2. Begin with frequent small doses rather than large doses.
3. Begin with much more insulin than one expects to use finally and reduce as control is achieved.
4. Try to begin management on an ambulatory rather than on a hospital basis.

For the first time I have used the word control. What constitutes the controlled diabetic? Here we have the great schism in diabetic therapy. At one end are the purists who think that control means maintenance of a relatively constant blood sugar by means of carefully weighed diets and meticulous insulin dosage, in other words, that the blood chemistry should be maintained at as nearly a normal figure as possible regardless of the effort involved.

At the other extreme are the free thinkers who advocate allowing the patient complete freedom of diet, ignoring the blood and urinary sugar, and prescribing insulin in adequate amounts to assure

satisfactory carbohydrate metabolism.

The middle path is probably the most common today. Why I prefer it, I will discuss under the third phase of therapy, but it consists basically of a uniform, adequate, estimated diet, with the insulin dosage so adjusted that no more than small total amounts of sugar are lost during the day by way of the urine. Blood sugar levels are largely ignored. All methods should stress freedom from insulin reactions as a cardinal point in management.

Advocates of all these methods claim excellent results. And why shouldn't they? In each case the fundamental tenet of correcting carbohydrate deficiency has been met. I have tried them all, and they all work well.

When we come to psychologic and educational therapy, we come to the most difficult phase. A diabetic is not an experiment in the chemistry lab; he is a person—usually a somewhat warped person, because he hates being a diabetic. There is nothing the average person hates more than departing from the average. For this reason, he needs great encouragement and frequent counsel. He needs examples like Bill Talbert, the tennis champion. He needs to meet other diabetics, and to see how normal they can be. This is the reason I avoid the purist view of therapy. One can so restrict the diabetic's life with grams and units and milligrams per cent that all joy and carefreeness are lost, and he becomes a slave to his disease. Likewise, I reject the free thinking approach because the diabetic needs some discipline. Otherwise, being human, he will become more and more careless, until an infection, vomiting episode, or something of that kind, will get him into serious trouble. With the center of the road method, a certain amount of control can be effected without constricting the patient's life.

Complications

Dr. George B. Crow, M.D., (Burlington): In a short time I can barely mention most of the complications, so I will mention a few of them and concentrate on one of them particularly.

As you know, various organs and tissues of the body may be involved in the diabetic state. We see many diabetics who first consult an ophthalmologist because of failing vision. Diabetic retinopathy is a common cause of visual failure. Optic atrophy is supposed to appear in diabetics who are heavy smokers, and then cataract formation. There has long been a discussion over whether diabetes is actually a cause of cataract. I believe there is a definitely diabetic cataract which differs somewhat from the ordinary cataract.

In connection with the eye, I want to mention one thing that we see fairly often in diabetes, that is, blurred vision which is not a part of any actual eye disease. It occurs fairly often in patients who have a rapid onset of diabetes. We see it also in those patients who are brought under rapid control. This is believed due to a change in osmotic tension and the amount of glucose deposited, and it usually takes about three weeks to pass off after control is gained. So, we advise our patients if they are thinking of having glasses refitted to wait at least three weeks to give this a chance to clear up.

There are various damages to the nerves, including neuritis. Wilder found in his series of cases that about 10 per cent had what is commonly called diabetic neuritis. This occurred most often in people past 50 years.

Then we come to the big question of what diabetes does to the vascular system, and there is a lot of argument about that. I think most men who see diabetes agree that it does contribute to occlusive disease, particularly in the vessels of the leg, the dependent vessels, and also, perhaps, to the coronary vessels. It is generally believed that cerebral accidents are no more common in the diabetic than in the nondiabetic. But certainly there is a higher percentage of coronary accidents in diabetics, and there is a higher incidence of gangrene in the diabetic than in the nondiabetic.

There is a localized superficial lesion of the skin that was called to our attention by one of the men at the Mayo Clinic in a bulletin of the Clinic a few months ago. We had seen it but did not know just what we were seeing. They described it as a superficial thrombosis. It goes on and develops ulceration and is very difficult to heal.

There are many others we could discuss, skin and so on, but we may say that the treatment of the complications is the treatment of the underlying disease, the diabetes. Of course, occlusive vascular disease involves treatment which is no different from that of occlusive vascular disease in the nondiabetic.

I thought, perhaps, we might spend the major part of the time on discussion of acidosis, the treatment of acidosis and coma. Here, again, there is not uniform agreement about all the phases of treatment. There are some, however, on which all agree. These patients rapidly become dehydrated when they go into acidosis and coma. So, it is very important to get water and salt into them. The electrolyte balance is changed, and they need a lot of it. I think you can pretty safely say that, if a patient has been in coma 24 hours, you should put in enough water to equal

5 per cent of their body weight. It will run probably somewhere in the neighborhood of $3\frac{1}{2}$ or 4 liters of water in the 24 hour period. That will vary a good deal. Some may require a lot more. If they have been vomiting, they will, and, with the Kussmaul breathing, they lose a lot more through the lungs.

Also, most men find that the introduction of large amounts of fluid rarely results in heart strain, provided it is not given too rapidly. In other words, the dehydrated patient takes up the fluid rapidly. It does not remain in the circulation any length of time. So, water and salt are important. Give it as normal salt solution, intravenously, by hypodermoclysis, or by rectum, or by all these methods. If the patient is able to swallow, you can give fluid, of course, by mouth.

In regard to insulin, in any acute condition such as acidosis and coma it is important to give vigorous treatment right from the beginning. We want a quick acting insulin, so we depend on the regular or the crystalline insulin. Some give protamine along with it. Personally, I do not like to do that until I begin to get the patient fairly well along, because I do not know just where I am. I do not know where that protamine is, whether it is in the blood stream and tissues, or whether it is still in the subcutaneous tissues, unabsorbed. So, I prefer to use the quick acting insulin until the patient begins to get under control, and then I start my protamine and gradually shift over.

How much shall we give? There is absolutely no rule about that. Joslin, in his most recent book, says that in the later years they have given a lot more than they did in the earlier years. The point is to give plenty of insulin. We usually give 100 units or so in the first four hours. Perhaps start with 50 units and repeat that in three or four hours, in the meantime watching the urine, testing it for sugar, and keep on doing that until the sugar gets down to less than 4 plus.

If you have an available laboratory, of course it is nice to have frequent blood sugars, and we do occasionally like to have that. But, in our experience, you can handle diabetic coma pretty well without blood sugars every three hours. It is a nice thing to have. It makes you feel a little better. Some men object to catheterization to get the specimen, but I have not seen any trouble from it. If we have to do it, that is what we do.

One point about giving insulin is that after the patient begins to regain consciousness you want to keep on watching him, because he may slip back rather quickly. That is one argument for giving protamine, but I do not see that it is a valid argument.

Another question is the injection of glucose, giving them sugar. So long as they have plenty of sugar in the blood and tissues, what is the point in giving more? It just fogs the issue on your tests. The only point is to be sure you have sugar there to be burned while you are giving your insulin. The patient is not dying of too much sugar in the blood, so it would not do any harm to give sugar, except you cloud the issue so far as your test is concerned. You do want sugar there to burn up your fatty acids. So, the point is that, by frequent testing, when you begin to get down to less than 4 plus, start giving some sugar and not until then. Glucose, of course, is preferred.

Rest, of course, is fundamental. These patients are apt to be quiet anyway. If they are in coma, they are certainly quiet. But we should save all the strength we can, because they may be going into circulatory collapse. They may be in shock, so application of external heat is important.

I recall several years ago seeing a diabetic patient 50 miles outside of Burlington in a farm home on a cold stormy night. The local doctor called me there. This patient, a young woman, was unconscious and had been for about 24 hours. We decided that transportation to a hospital at that point was not advisable. The local doctor had done everything that should be done except give enough insulin. He was a little backward about that. He had given salt solution, per rectum. They did not have any hot water bottles and, being a resourceful man, he sent the farmer out to the corn crib for a basket of corn on the ear. He put that in a wash boiler filled with water and boiled it until the corn was thoroughly saturated with moisture and heat; then, after covering the patient with blankets, he put a layer of ears of corn around her, and covered that with another blanket. I tell you that was the nicest steam bath I have ever seen. It worked beautifully.

The question of alkali is a "hot" subject. As you know, Joslin does not use it and is very much opposed to it. We do not run into coma very often. We have seen some cases of acidosis bordering on coma, but not real coma for quite some time. When I have seen coma, I have not often alkalized. I believe there may be a place for it in those patients who have not responded after having had what we believe to be adequate doses of insulin to cause the return of consciousness, and to overcome the terrific labored breathing (Kussmaul breathing). I think there, perhaps, sodium bicarbonate would be a good thing, perhaps 25 gm. or so given intravenously, because other men have reported excellent results. Wilder particu-

larly recommends that, and he says he has seen the labored breathing cease within a few minutes after the injection of alkali under such conditions.

Gastric lavage is important. When you start to feed them, it is nice to have a clean stomach and colon. You can start your saline solution by rectum later on.

Circulatory failure is sometimes a factor and not always in old people. Probably it is not primarily a cardiac failure but general shock. Epinephrine is helpful there. Even blood transfusions may be advisable in severe cases. Digitalis probably has little value. It might be used if there is evidence of cardiac failure with venous congestion. Renal failure is a thing that sometimes occurs. Getting fluid in, of course, is helpful. I have never tried this, but Joslin has suggested 60 cc. of 10 per cent sodium chloride intravenously in renal failure. He says he has seen no harmful effect from it.

Panel Discussion

Chairman Swanson: I have had one question submitted, which has to do with the treatment of diabetic neuritis. Dr. McFarland has volunteered to discuss that briefly.

Dr. McFarland: I think the subject of diabetic neuritis is dangerous. In the first place, neuritis is much more common than diabetes. Even though there are a half-million diabetics in the United States, there are many more people than that with neuritis, and I think other causes of neuritis should be looked for. The last thing to which one should ascribe the neuritis is diabetes.

If, however, it is a true polyneuritis, definitely associated with the diabetes, and one can find no other cause for it, then I think diabetic neuritis is basically dietary deficiency neuritis, and the dietary deficiencies should be corrected.

Don't forget that many diabetics, even perhaps the majority of the older diabetics, are still on grossly deficient diets, because they were put on them 15, 20 or 25 years ago and have never changed. The educational job that was done on those people was so good at that time that it is difficult to get them to eat enough carbohydrates.

Dr. Crow: May I add a word to that? I was in hopes that Dr. McFarland would mention, he did, indirectly, the deficiency state, but he did not mention specifically the vitamins. Don't you think sometimes vitamin B is important there?

Dr. McFarland: I intended to infer that, since the metabolism of vitamin B and carbohydrate is tied up intimately. If you are going to correct the deficiency, the vitamins would be one of the things you would use.

Chairman Swanson: "What about the case with high blood sugar, and absent or seldom showing urinary sugar?" Dr. Lueck!

Dr. Lueck: Practically all aspects of the treatment of diabetes are controversial. This is another

one of them. There are many who know what they are talking about who would say that high blood sugar does absolutely no harm, because, if we lose sugar in the urine, we expect the patient to lose weight, and such a patient will go downhill gradually.

The patient with high blood sugar and no glycosuria does not lose any sugar in the urine; it must be metabolized within the body, and hence there is no reason to worry about the high blood sugar.

I suppose you speak of the range of 200, 250 mg. per 100 cc., or so. There is the occasional severe diabetic who gets a blood sugar of 400 or 450 and still has no sugar in the urine. That patient has an associated renal failure and is a serious proposition.

The other way of looking at it is that this is a patient with high blood sugar who is simply not a normal individual physiologically, and he probably should get insulin.

My own feeling is that this patient should be treated and kept in a state of normoglycemia, just as you who are not diabetic.

Chairman Swanson: As Dr. Lueck pointed out, there is some little disagreement as to how that particular patient should be handled. I think his remarks might be tempered by the observation that sometimes the state about which he was speaking occurs in an obese individual and will disappear when the obesity is removed. So that is one item which may be kept in mind.

Here is a question directed at Dr. McFarland, "What are some of the disease states of which diabetes mellitus is a symptom complex?"

Dr. McFarland: Dr. Lueck has discussed with you the role of the pituitary and the adrenal cortex. There seem to me, certainly, to be some diabetics who are primarily pancreatic; for example, I have one woman whose diabetic onset was marked by the occurrence of acute pancreatitis 10 years ago, and she has been diabetic ever since.

The most interesting group to me, because I think they are curable, are the obese and the liver diabetics. Those people who have liver disease which is reversible, and those who are obese, have diabetes which to the ordinary tests is indistinguishable from any other diabetes. Many have been taken off insulin permanently, who formerly took fairly large amounts, simply by reducing their weight.

We have devised a rather easy test to determine whether or not diabetics come in that class. We put them on an excessively high carbohydrate diet for one week and repeat the glucose tolerance at the end of the week. If the diabetes is on this basis, the test shows a striking return toward normal. Then we put them on high carbohydrate, extremely low fat diets, and most of the evidence of diabetes disappears.

There are other theoretic and possibly practical causes of diabetes. Arteriosclerosis as a cause of diabetes has been touched on. I have an interesting case that I will mention briefly.

An 80 year old woman suddenly became severely diabetic. I do not know about the other doctors, but she is the only person 80 years old that I have seen who needed over 100 units of insulin a day. As time has gone on, she has gradually improved, over about three years, and no longer needs insulin. I think she had a thrombosis or other vascular accident which precipitated her diabetes. Where it occurred, I do not know.

Chairman Swanson: I think it might be mentioned in connection with this question that the condition referred to in the question that Dr. Lueck and Dr. McFarland discussed is sometimes referred to as an individual with potential diabetes or a so-called prediabetic state. I take it that Dr. Lueck agrees with that concept, also that he would not advise treatment immediately.

Here is another question which we will ask Dr. Crow to discuss. It is in four parts. "In original or first severe diabetic coma, what governs the size of the original dose and give specific example? Do you cover this with glucose? Discuss mixing of protamine and regular insulin, and the proportions, and do you give it in the same syringe?"

Dr. Crow: The size of the original dose in diabetic coma will depend on several things. First, is it a child or an adult? How long has he been in coma? Anyone who has been in coma 24 hours is in a bad way. You want to get him out of it as soon as you can. The patient can reach an irreversible state where he does not come back.

As I mentioned before, we would not give less than 50 units the first dose; we repeat that in three or four hours, and again every three or four hours, until the patient begins to show signs of returning consciousness, or until the urine begins to show evidence of diminished acidosis and sugar, or both.

We do not use insulin mixtures. I have no quarrel with anyone who wants to use them. I have tried some of them. My objection to them is that, if the patient is not controlled by protamine insulin alone, i.e. negative sugar test in the morning and a positive sugar test at noon or night, or both, then they need some clear insulin, that is, the regular or crystalline quick acting insulin, to cover during the day.

We start out usually with a third or fourth of the protamine dose of clear insulin, and it is given separately. Then we give the clear insulin first, for the reason that, if you give the protamine insulin first, even a few drops adhering to the walls of the syringe will change part of that clear insulin over to protamine insulin. So, you are not giving a full dose of clear insulin. We like to use them separately. The only objection is that they get two sticks with the needle instead of one. You can absolutely tailor-make your dose that way. The proportions that you are going to use of clear insulin and protamine varies in different people, and it varies in the same individual sometimes over comparatively short periods of time.

On the question, "Do you cover your insulin with glucose?" I tried to answer that a while ago. Perhaps the question was submitted before I made my statements about it. We do not give glucose until there is evidence that the glucose supply is being exhausted or is lowered to the point where it soon may become exhausted.

We want to have enough glucose to be fired by the insulin, to burn the fatty acids, because the fatty acid is causing the coma. That is the point to bear in mind. I do not know that a little extra glucose would do any harm. The only point is that it fogs up the test.

Chairman Swanson: Since there is a difference of opinion at times on this point, I would like to ask Dr. Lueck to state his idea on the subject.

Dr. Lueck: I hope Dr. Crow will not be offended if I tell you the other side of the story. You have in diabetic coma an insulin-resistant patient. If that patient were not insulin-resistant for some reason or other, he would not be in coma. You are fighting a severe insulin deficiency; therefore, you need tremendous doses of it.

It has been my custom over the past two years to gradually increase the insulin dosage to where now, as soon as the diagnosis is made of an adult in coma, we give that patient 100 units of regular insulin, repeat it in one hour, and again in another hour. That is 300 units in two hours. This schedule is not too far removed from that of a group who gives 300 units upon diagnosis of diabetic coma.

Whatever else one does in the way of treatment with alkalis, or intravenous glucose, or anything else, the greatest mistake that one can make is to give an insufficient amount of insulin. More patients are lost, in fact, most patients who die of diabetic coma are lost, because the dose of insulin was not large enough.

With respect to the matter of insulin mixtures, I would like to tell the other side of that story, too. Dr. Arthur Colwell, of Evanston, who has a reputation for knowing how to time insulin dosage, has switched a large percentage of his patients to insulin mixtures, one part of protamine to two parts of regular insulin.

Franklin Peck, of the Eli Lilly Company in Indianapolis, has also switched the majority of his patients to the insulin mixture. These patients have a much smoother diurnal blood sugar curve than those who get separate injections, because the patient who has protamine insulin before breakfast, supplemented by a separate dose of regular insulin, is often pushed into hypoglycemia before the noon meal. This does not usually happen in the patient receiving a mixture.

In my practice I have also switched some 60 or 65 per cent of my patients to an insulin mixture. They gain weight, feel better, and are happier, because it means only one injection.

The new insulin that is about to be produced (not on the market yet), NPH 50, is similar in activity to a two to one mixture. The chances are that it will

entirely replace protamine insulin as it is now produced.

Chairman Swanson: As the moderator of this discussion, I think perhaps I should admit that in my practice I take the moderate viewpoint. Some of my diabetics are handled as Dr. Lueck suggests, and some of them as Dr. Crow suggests. I think, perhaps, there is place for both, depending upon the individual concerned and the type of personality involved.

There are two more points that have not been discussed and I think should be mentioned. One is that occasionally in the treatment of diabetic acidosis, as the patient begins to recover, he may develop uremia, which is occasionally referred to as extrarenal azotemia, because it may occur apparently in the absence of renal damage. There is a temporary inability of the kidney to excrete nitrogenous products. This can best be avoided, presumably, by restoring electrolyte balance of the blood as rapidly as possible after the institution of treatment for coma.

Recently an additional point has been made in that respect; that is, some of the patients seem to do better if a little potassium is administered to them parenterally. It may be that this is one of the additional factors which would help prevent extrarenal azotemia.

The other point that I thought should be mentioned is the prospect of immediate surgery in the improperly controlled diabetic. Suppose we have a patient admitted who is in rather severe diabetic acidosis and is in need of surgery before too long. Perhaps he has an acute infection, or something of that order. How far do you have to go before you dare to turn him over to the surgeon for anesthesia and operating procedure? I think, if possible, if the situation is not too acute, you should get him to the point at which ketone bodies no longer appear in the urine. You certainly do not have to get the blood sugar down to normal, but, if you can rid him of his ketosis, that is extremely desirable. There may be times when you are forced to go ahead before completely achieving that end, but that should be the aim.

In this connection, since anesthetics occasionally have an effect on the blood sugar, I think such a patient, even though his blood sugar is still too high, may be well fortified by some parenteral glucose either before or during the operation to prevent him from falling into hypoglycemia unduly.

Summary Commentary

Chairman Swanson: The etiology of diabetes mellitus has been discussed by Dr. Lueck and a goodly portion of the entire endocrine system indicated as being partially responsible for diabetes. The pathogenesis, however, is chiefly concerned with the pancreas and deficient insulin elaboration from the islet cells of Langerhans.

The dietary management of diabetes has been shown to have become more liberal in its carbohydrate content than heretofore, but, in general, some restriction

is still advised by most physicians. A few are already instructing their diabetics to eat whatever they please, and to simply take enough insulin to keep themselves out of acidosis, without too much regard for the amount of glycosuria or the level of the blood sugar. Most of us still believe that at least some restriction of carbohydrate content is advisable, and that a general aim of keeping the urine sugar free and the blood sugar relatively normal at least is justifiable. The total caloric content of the diet depends, of course, on the patient's needs. The meal distribution can be either as needed or as desired; for the most part, the total food intake can be divided into three equal portions, or perhaps on a percentage basis of 20-40-40 if it suits the patient better.

Fifty per cent of all diabetics, in round figures, can be controlled without insulin, or with diet alone. Administration of insulin will, however, be needed in the remaining group. In perhaps 25 per cent or one half of those needing insulin small doses of regular insulin or protamine zinc insulin take care of the situation rather easily. In approximately 15 per cent combined usage of regular and protamine zinc insulin is desirable, or perhaps a prepared mixture of the two can be substituted. In this connection, globin insulin or the new NPH 50 can be used to advantage. About 10 per cent of all diabetics, or perhaps less, will be difficult to control. These are sometimes referred to as "brittle" or unstable. Infection, particularly of the chronic variety, should be searched for and ruled out whenever possible. The control may have to be a compromise between giving the patient as little insulin as necessary to keep him out of acidosis but not enough to keep him fully controlled, because at that level he slips into hypoglycemic reactions entirely too easily and unpredictably. Many of these patients will do well on mixtures of protamine zinc insulin and regular insulin; sometimes only protamine zinc seems to be justifiable.

As to the treatment of diabetic acidosis, all agree that the administration of fluids and insulin is in order immediately after the diagnosis is made. The administration of fluid, of course, involves a careful restoration of electrolyte balance, including the administration of potassium. Recent studies have suggested that in some instances of diabetic acidosis small amounts of potassium are needed. If there is any doubt about the patient's general condition, probably potassium should be administered on general principles based on our present knowledge of the subject. Whether or not one should administer glucose immediately in instituting treatment for diabetic acidosis is disagreed upon by many authorities. Those who argue against it point out that the blood sugar usually is already too high, and that the fundamental lack is that of insulin, not of sugar. On the other hand, instances in which the terminal blood sugar falls below normal just before the death of a patient in diabetic acidosis have occurred often enough to make me feel that it is perfectly justifiable

to start glucose administration immediately. One may thus avoid an unnecessary hypoglycemic death. On the other hand, also, there is no evidence that the height of the blood sugar has anything to do with the prognosis or with the depth of the patient's coma, so that I personally see no harm in starting glucose immediately upon beginning treatment, and this is our regular practice. Blood sugars are useful, of course, but are not necessarily needed in treatment of diabetic acidosis. Urinary sugar and ketone determination will furnish in most instances an adequate index of the need of insulin to combat the acidosis. I say this for the benefit of those general practitioners who may not always have laboratory facilities for blood sugars immediately available. I do not think they need to suffer any inferiority complex because of such a situation; their treatment of the disease can be just as successful as that in the best hospital facilities. One word of caution in connection with acidosis: watch out for azotemia. A syndrome of extrarenal azotemia, in connection with or complicating diabetic acidosis, which occasionally appears on the second or third day after treatment has been begun, has been described and discussed on many occasions. Apparently the best way to combat it is the early restoration of electrolyte balance toward normal and the maintenance of adequate fluid intake and output.

One last suggestion concerning emergency surgical procedures in the acidotic diabetic patient: it is certainly wise to insure that the patient is free of ketonuria before surgical procedures are undertaken. Along with this, an adequate carbohydrate utilization level should be watched for. If necessary, such carbohydrate intake can be supplied parenterally and covered adequately with insulin. This, in the presence of a good blood supply in a nonanemic patient, will allow a surgical procedure to be carried out successfully and insure healing as well as in the non-diabetic patient. It has been shown that the actual blood sugar level is not important in the actual healing process carried on in the body, as long as the carbohydrate utilization, blood supply, and quality of of the blood itself are adequate.

MISSISSIPPI VALLEY MEDICAL SOCIETY TO MEET SEPTEMBER 28 TO 30

The fourteenth annual meeting of the Mississippi Valley Medical Society will be held at the Jefferson Hotel, St. Louis, Mo., on September 28, 29, and 30, 1949. Over 30 clinical teachers will conduct the post-graduate assembly, whose entire program is being planned to appeal to general practitioners. No registration fee will be charged, and every ethical physician is invited to attend. Programs may be obtained from Harold Swanberg, M.D., Secretary M.V.M.S., 209 W.C.U. Bldg., Quincy, Ill.

RETINOPATHY IN THE YOUNG DIABETIC

Glenn L. Walker, M.D., Iowa City

Diabetic retinopathy was encountered rarely in the young person with diabetes before the discovery of insulin 28 years ago. The period of survival of the young diabetic patient during that era was so short that this manifestation seldom developed. According to Joslin¹ "for the 24 years before the discovery of insulin, of a group of 400 diabetic children, after two years of diabetes, one-half were dead." Since the advent of insulin, and with other refinements in the treatment of diabetes mellitus, particularly the care of acute complications, it has become relatively easy to keep the diabetic child alive. As a result, ocular complications are being encountered with increasing frequency, and the most common as well as potentially dangerous, diabetic retinopathy, often results in marked impairment of vision, which all too often progresses to blindness. Dolger² found this "shocking sequel to retinopathy" in 5 of 55 juvenile diabetics, and White and Waskow³ report near or total blindness in 15 per cent of 200 juvenile diabetics having the disease for 20 years or longer.

At the present time there appears to be little room for doubt that diabetic retinopathy is a specific entity, dependent in some way on vascular damage associated with diabetes mellitus. Exactly how this damage is produced remains unsettled, but recent publications clearly indicate the site of the injury.

As already indicated, the incidence of diabetic retinopathy is increasing from year to year. Waite and Beetham,⁴ in a survey published in 1935, found retinopathy in only 1.9 per cent of diabetics less than 30 years of age and, in 1942, O'Brien and Allen⁵ found an incidence of 4 per cent in 555 diabetics of a comparable age. Wagener,⁶ in 1945, found retinal complications in 8.3 per cent of patients less than 30 years of age. Furthermore, the latter author found retinopathy in 76 per cent of the patients less than 30 years of age who had had diabetes for more than 10 years, while those patients over 30 years of age who had had the disease for more than 10 years showed an incidence of 64 per cent. This finding again shows that duration of the disease is a more potent factor in producing retinal lesions than is the age of the patient, and current unpublished studies now under way at the State University of Iowa Hospitals confirms this observation.

The evolution of retinal changes characteristic of diabetes may be observed in young diabetic

patients without the complicating factor of vascular lesions or retinopathy secondary to hypertension. Recently, evidence has accumulated which indicates that the vascular damage occurs almost entirely on the venous side of the circulation, and that the arterioles play only a passive role in the development of the retinopathy. Venous dilatation is usually, but not always, the earliest visible abnormality, and Ballantyne⁷ considers overfilling of the veins (venous stasis) an important early sign, estimating that it occurs in one third of the diabetic patients he has examined. However, the appearance of one or more deep punctate hemorrhages, usually in the perimacular area, must still be considered the first definite evidence of retinopathy. More recently it has been shown histologically that many of these pin-point red dots are actually microaneurysms. Jonas Friedenwald,⁸ while making a study of retinas from diabetic patients in 1936, recognized these capillary aneurysms. Ballantyne⁷ later reported in detail on these lesions and described them "as perfectly round, and their globular form is sometimes indicated by the presence of a bright central reflex." Histologically, "the aneurysms are situated in the inner nuclear layer and are globular distentions of the capillaries which form a link between the first capillary plexus in the ganglion cell layer and the deeper plexus situated at the outer boundary of the inner nuclear layer; that is, the aneurysms are situated between the precapillaries on the arterial side and those on the venous side of the circulation. . . . The formation of the capillary aneurysms seems to require the operation of two factors; weakening of the resistance of the capillary walls and a relative increase of pressure within the vessel." Ballantyne⁷ considers the appearance of these minute globular aneurysms on the retinal capillaries, usually discovered singly or in small numbers within or near the macular area, as the earliest unequivocal sign of diabetes. More recently Friedenwald,⁸ by the use of the Hotchkiss fixed-carbohydrate stain and flat retina preparations, again beautifully demonstrated these aneurysms. He states, "In the diabetic retinopathy the aneurysms are regularly present by dozens, sometimes by hundreds, and their pattern with the surrounding exudates and hemorrhages appear, so far, to provide a characteristic picture." Similar preparations of flat retinas from nondiabetics disclosed only an occasional capillary aneurysm of this type.

The exact origin of the yellowish white plaque deep in the retina remains unsettled, although Waite and Beetham⁴ expressed the opinion that they represented hyalinization of hemorrhage. According to Elwyn,⁹ the deep deposits follow defi-

cient oxidation of the retinal tissue, and Ballantyne⁷ suggested that at least some of the punctuate white spots were thrombosed microaneurysms. Clusters of exudate surrounding microaneurysms were found by Friedenwald⁸ with such frequency that he believed they resulted from the leakage of plasma through the aneurysmal wall. Whatever the mode of origin, it is generally agreed by most observers that the deep "waxy" exudate appears later than the hemorrhage and/or aneurysms and thus represents a later stage in the evolution of the retinopathy. At first punctate, usually, but not always, situated in or around the macular area, these deposits may coalesce to form the familiar white plaque which often appears in large numbers. They may assume a variety of patterns, occasionally simulating a circinate retinopathy, but rarely, if ever, forming a macular star.

In young diabetics the above described retinal lesions occur almost invariably in the presence of ophthalmoscopically normal arterioles and in the absence of edema of the retina and nerve head. Clinically, they are identical with the lesions encountered in older diabetics without hypertensive vascular changes. In many instances, usually after diabetes has been present for several years, and probably associated with widespread vascular damage elsewhere in the body, particularly in the kidney, the systemic blood pressure becomes elevated and hypertensive vascular changes become visible in the fundus. These changes, arteriolar narrowing, localized constrictions, and sclerosis, may be severe enough to produce retinal lesions characteristic of hypertensive retinopathy. At times these changes consisting of edema, cotton wool patches, and superficial striate hemorrhages are superimposed on a diabetic retinopathy already present, and in this event the picture produced in the fundus will be that of a mixed diabetic and hypertensive retinopathy. This mixed type of retinopathy reported by Wagoner⁶ occurred in 4.6 per cent of his 1945 series of cases. In general, the retinal lesions progress slowly and central vision remains good unless the foveal region happens to become involved.

The late stage of the retinopathy characterized by deterioration of vision is heralded by the onset of recurrent retinal bleeding, and sooner or later resultant proliferating retinitis leads to disorganization of the retina and terminal detachment.

In a small percentage of the cases, gross changes in the large and medium sized veins overshadow the rest of the picture. These venous changes present a varied ophthalmoscopic picture and consist of irregular dilatations and constrictions, deposition of a yellowish white granular material along

the vessel wall, irregular thickening and duplication of venous channels, and the formation of networks or fans of new vessels in and on the surface of the retina. Often attached to the nerve head, the network of thin-walled vessels may proliferate for a considerable distance into the vitreous and not infrequently become the source of recurrent vitreous bleeding. Histologically, at least some of the venous changes have been shown by Klien,¹⁰ O'Brien and Allen,¹¹ Gibson and Smith,¹² Ballantyne,⁷ and others, to depend on a process of phlebosclerosis. Usually considered a late complication, these changes may from the onset play a dominant role and progress to essential blindness with alarming rapidity.

Although some progress has been made in our understanding of the local pathogenesis of diabetic retinopathy, its treatment continues to be a perplexing problem. The principle that early and physiologic control of the diabetes may avert later hopeless and disastrous complications is gaining wider recognition, while the thesis that crippling vascular damage is an inevitable concomitant of diabetes, regardless of the type of management, is being questioned with greater frequency. Allen,¹³ and Boyd and Jackson,¹⁴ have long advocated meticulous control of diabetes, and recently Joslin¹⁵ has emphasized the importance of continuous supervision of diabetics as a means of detecting and correcting any untoward symptoms. Although White and Waskow³ report demonstrable vascular lesions in 92 per cent of 200 juvenile diabetics surviving more than 20 years of the disease, interestingly enough, "Among these patients inactive, controlled diabetes characterized the unaffected group, and active, uncontrolled diabetes characterized those who were moderately or markedly affected. Age and duration of diabetes were essentially the same in the three."

Purely from the statistical standpoint, proper regulation of the diabetes appears to offer the best insurance against the development of retinopathy and the best method for its control during the early stages. Certainly experience has shown that little is to be expected from regulation of the diabetes once the retinal changes have reached the advanced stage, but some evidence has accumulated which indicates that the early lesions are reversible and therefore possibly amenable to strict diabetic control. Frequent and careful ophthalmoscopic examination affords the only means of detecting these early retinal lesions, because ocular symptoms are absent during the early incipient stage, unless the fovea happens to become involved.

A considerable percentage of diabetics is known to have an increased capillary fragility, particularly those patients with retinopathy, and

administration of the antifractility drugs, hesperidin and rutin, often results in an improvement of the fragility index. However, only in a small per cent of the cases does this method of therapy appear to have a beneficial effect on the course of the retinopathy. Beardwood, Roberts and Trueman¹⁶ recently reported improvement of the retinopathy of 25 per cent of the cases who were treated with hesperidin and rutin, but they also noted 11 per cent improvement in patients who did not receive this therapy. Further investigation appears to be necessary to prove or disprove the value of the known antifractility drugs as a means of preventing or controlling diabetic retinopathy.

BIBLIOGRAPHY

1. Joslin, E. P.: Insulin's 25th anniversary. *Diabetes Abstracts*, v:37-38 (April) 1946.
2. Dolger, H.: Clinical evaluation of vascular damage in diabetes mellitus. *J.A.M.A.*, cxxxiv:1289-1291 (Aug. 16) 1947.
3. White, P., and Waskow, E.: Clinical pathology of diabetes in young patients. *South.M.J.*, xli:561-567 (June) 1948.
4. Waite, J. H., and Beetham, W. P.: Visual mechanism in diabetes mellitus; comparative study of 2,002 diabetics and 457 non-diabetics for control. *New England J. Med.*, cxvii:367-379 (Feb. 28) 1935; 429-443 (Mar. 7) 1935.
5. O'Brien, C. S., and Allen, J. H.: Ocular changes in young diabetic patients. *J.A.M.A.*, cxx:190-192 (Sept. 19) 1942.
6. Wagener, H. P.: Retinopathy in diabetes mellitus. *Proc. Am. Diabetes A.*, v:203-215, 1945.
7. Ballantyne, A. J.: Retinal changes associated with diabetes and with hypertension; comparison and contrast. *Arch. Ophth.*, xxxiii:97-105 (February) 1945.
8. Friedenwald, J. S.: New approach to some problems of retinal vascular disease. *Tr. Am. Acad. Ophth.*, p. 73-87 (Nov.-Dec.) 1948.
9. Elwyn, H.: *Diseases of the Retina*. Philadelphia, Blakiston, 1946, p. 45-106.
10. Klien, B. A.: Retinitis proliferans: clinical and histologic studies. *Arch.Ophth.*, xx:427-436 (September) 1938.
11. O'Brien, C. S., and Allen, J. H.: Unusual changes in retinal veins in diabetes. *Arch.Ophth.*, xxiv:742-757 (October) 1940.
12. Gibson, G. G., and Smith, L. W.: Retinal phlebosclerosis. *Arch.Ophth.*, xxvi:840-851 (November) 1941.
13. Allen, F. M.: Abstract of Discussion, Furtherance of Treatment of Diabetes Mellitus: Joslin, E. P.; (15).
14. Boyd, J. D., Jackson, R. L., and Allen, J. H.: Avoidance of degenerative lesions in diabetes mellitus. *J.A.M.A.*, cxviii:694-696 (Feb. 28) 1942.
15. Joslin, E. P.: Furtherance of Treatment of Diabetes Mellitus. *J.A.M.A.*, cxxxix:1-7 (Jan. 1) 1949.
16. Beardwood, J. T., Jr.; Roberts, E., and Trueman, R.: Observation on the effect of rutin and hesperidin in diabetic retinitis. *Proc.Am. Diabetes A.*, viii:243-256, 1948.

HUNTINGTON'S CHOREA

Victor Zike, B.A., Clarinda, and
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Huntington's chorea is a degenerative disorder of middle life affecting the basal ganglia of the brain and characterized clinically by jerky involuntary muscular movements and progressive loss of mental function.¹ Essentially it is hereditary and chronic, occurring as a rule as a mendelian dominant in adults from 30 to 50 years of age. However, if the chain is interrupted and an individual escapes the disease, he will not transmit it. Sporadic cases are seen, and in successive generations the age of onset may decrease, and in some families a psychic disorder of hyperkinetic

type, i.e. mania, may be a predominating feature.² The pathology is characterized by atrophy and sclerosis of basal ganglia and psychomotor areas of the cerebral cortex. No efficient medical therapy is known; the disease progresses insidiously to incapacitate nearly all the voluntary muscle groups, and the mental deterioration leads eventually to hospital commitment. Although the disease is said to be comparatively rare, patients from several families with it are in Clarinda State Hospital records. The following case report was evolved from social service investigation of one of these patients. (See chart on next page.)

K.W., white, widowed female, age 59, was admitted to Clarinda State Hospital on Oct. 5, 1948, because of dementia, progressing the past several years, associated with extensive involuntary jerking of the trunk and extremities which rendered her physically helpless and debilitated.

Born in Germany, in 1889, the second of six siblings, the patient was 4 years old when the family immigrated to the United States. Her childhood had been unhappy because of her father's drunkenness and mother's nervous illness (Huntington's chorea). She went to the eighth grade in school and was said to be happy and full of life at 17, when she became engaged to an Iowa farmer in 1905 and married him a year later. There were 10 children born to this marriage, all of them before the patient herself showed symptoms of her nervous disorder.

Her husband became alcoholic and was abusive to the patient in the last 15 years of their married life, making fun of her choreiform movements, which began in 1933 and were gradually increasing. This behavior in pushing the patient around, locking her in rooms, and withholding food, finally led to his commitment as insane on complaint by the children in 1937. He died in Clarinda State Hospital 8 years later at the age of 66, diagnosed senile psychosis, depressed and agitated type.

Menopause was difficult for the patient, accentuating her nervous disorder. When her home was broken up, her children took turns caring for her but found her stubborn and embarrassing in company by her loud talk, careless dress, flightiness and inability to make up her mind. She was fearful of storms and of being hurt and prowled the house at night. It is said she hadn't bathed or washed herself for the past five years prior to commitment. Her memory and judgment deteriorated; she became untidy, bad tempered, and finally an impossible burden for private home care. A psychiatrist who examined her in 1942 tentatively diagnosed chorea but lacked sufficient family history at the time to call it hereditary. An

Acknowledgment is made to Miss Vivian Reedholm for assistance in compiling the geneologic chart and to Dr. F. J. Warner, Cherokee State Hospital, for the pathologic report.

out-patient examination at Iowa State Psychopathic Hospital in September 1948 made the diagnosis, Huntington's chorea.

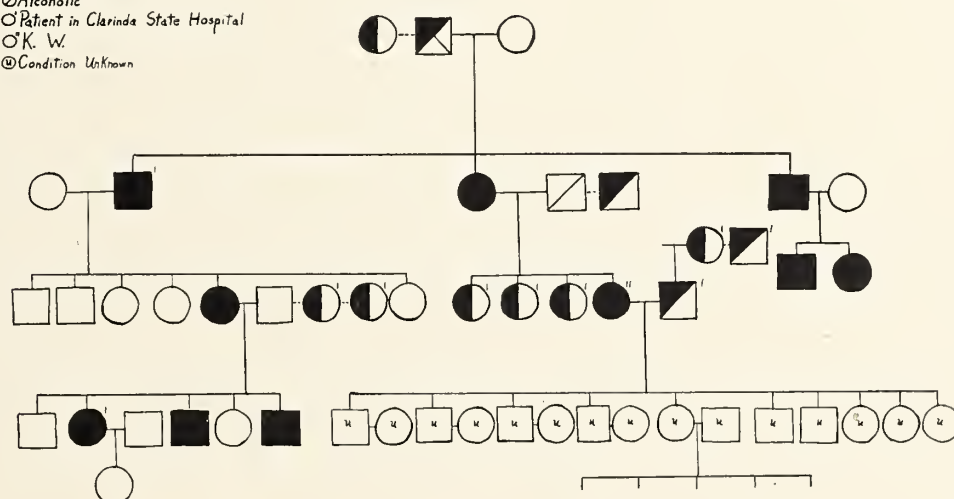
On her Clarinda admission, the patient was bedfast, emaciated, with pronounced involuntary jerking of face, trunk and extremities. Her skin was discolored by bruises and pigmented nevi. Her speech was slurred and barely intelligible; mental status was in advanced dementia. Blood pressure was 146/100, without arteriosclerosis; heart and lungs were normal; leukocyte count was raised to 18,000; albuminuria was 2 plus, blood and spinal fluid Wassermann negative; spinal fluid cell count zero; protein 13 mg. per cent. Heavy

epileptic. Her mother was hysterical and died of paralysis agitans. (We take the liberty to suggest, in view of the subsequent history, that the illness of the mother and grandfather was Huntington's chorea.) Both maternal uncles had Huntington's chorea, as did three of their children, and an uncle on her father's side was insane. One of the cousins with Huntington's chorea married a man with two insane sisters, and of the five children born of this union three developed Huntington's chorea. Two cousins developed the jerky movements at an early age and committed suicide. The patient's three sisters became psychotic and were committed to Clarinda

Legend

- Huntington's Chorea
- ◐ Psychosis
- ◑ Psychotic Epileptic
- ⊙ Alcoholic
- Patient in Clarinda State Hospital
- ♂ K. W.
- ⊙ Condition Unknown

Genealogical Chart of K.W.



doses of belladonna alkaloids did not control the choreiform movements, and the patient died December 17, two months after her admission, with a right-sided lobar pneumonia. Autopsy found atrophy of internal organs, with pneumonic infiltration and extensive pleural adhesions of the right lung. Her brain showed extensive arteriosclerosis, with atrophy of the basal ganglia, brachium pontis, and dorsal surface of the right cerebellar hemisphere. There were numerous small punctate hemorrhages in the subcortical white matter of cerebrum, pons, and dentate nucleus, all changes typical of Huntington's chorea.

Our main interest in this report is centered around the family history of this patient, which so far has brought to light 20 known cases of mental and nervous disorders, all occurring in four generations. Her maternal great aunt in Germany was reported insane, and her grandfather insane

State Hospital, two of them manic-depressive, mixed type, and the other manic-depressive, depressed. Two brothers died in infancy. The patient married young to a German farmer whose mother and maternal uncle were psychotic. As already noted, her husband became alcoholic and eventually died in Clarinda State Hospital with a psychosis. Of their 10 children none have reported nervous disease. The eldest boy is 39, and the fourth youngest is now 23 years old. Four sons and a daughter have married, and the daughter has 5 children. Information is not complete for the other married children, but it is not likely that all of them will escape Huntington's chorea.

From a social point of view, the three outstanding characteristics of Huntington's chorea as a disease are (1) dominant inheritance from parent to child, (2) delay in appearance of symptoms

until the patient's middle life when he may be married and already have children carrying the disease, and (3) slow but inexorable progression to dementia and physical helplessness in spite of any treatment yet known. One can see how such characteristics facilitate the spread of the disease and can burden a community with a number of hopeless invalids. In this family there was no apparent attempt by the patients to limit the number of the children, although we can expect 80 per cent of them to develop the disease. Further, they seem to have chosen friends and marriage partners from other defective families.

When efforts were first made to compile an adequate family history, a letter was received from the patient's daughter who wrote, "I have always been ashamed of my mother for her odd behavior and jerking movements. Even as a small girl I wondered why she was different from mothers of my friends. She was always so loud when talking, was very nervous and a source of worry and embarrassment to me. In later years I worried considerably about her condition and wondered if it was hereditary. It seems there is too much of this in our family for it to be otherwise."

One of the patient's cousins was also a sufferer from this disorder but was never hospitalized, being cared for by her husband and children until death. Her husband rather reluctantly disclosed, "I know my wife's father had jerky movements and was hospitalized here." This proved to be another case of Huntington's chorea.

An interview with the patient's son was extremely difficult because of his reticence, evasiveness, and denial of his mother's actual symptoms, although from other sources we know he was familiar with her behavior and family background. Two letters from the patient's daughter, a registered nurse, expressed concern about the hereditary nature of her mother's illness. One can see from the above that Huntington's chorea has a psychic component in the anxiety and mental depression felt by all of the family members who realize their situation. Some may require psychiatric help. When Huntington's chorea is suspected, one should, therefore, take great pains to establish the diagnosis, review the family history, and advise the patient and his family accordingly. Questions naturally arise about marriage, having children, and the probabilities of any particular member of the family developing the disease.

Of the 20 patients reported in this particular family, 9 entered Clarinda State Hospital and spent an aggregate residence of 60 years. At an average cost of hospitalization of only \$30 per month, the bill to date for those 9 has been \$21,-

600. One of the patient's younger sisters has already spent 24 years of her life in the State Hospital; another sister, 8 years, before dying in 1932; and a third sister, 11 years, before her death. The patient's uncle was 6 years in this hospital and her husband 8 years. The other relatives, all younger, face the possibility of remaining here the rest of their lives.

In conclusion, it must be noted that Huntington's chorea may usually be traced from generation to generation. This particular patient's history is illuminating to professional and lay people by showing the tremendous incidence of Huntington's chorea and psychosis in one family. The terrific price these families pay in emotional instability, fear, and anxiety, notwithstanding, should be remembered in addition to the huge cost of hospital maintenance which the taxpayers of Iowa have paid and will pay for this family.

The patient's children indicate an incompleteness of Iowa's present eugenic sterilization law, which does not apply to patients with Huntington's chorea.

Though the children have not developed the disease, it is probable that half of them may do so and transmit it to their descendants. This danger should be explained to them. When they understand it, if they are willing to forego children, the cost of the operations will be fully justified at governmental expense by the future institutional costs which they will make unnecessary. Even more important are the many years of invalidism and mental deterioration which potential Iowans can be spared.

Summary

1. The case history of a patient with Huntington's chorea is related.
2. Nineteen of her relatives are so far known to have suffered mental or nervous disorders.
3. Nine of those committed to Clarinda State Hospital have so far cost their Iowa communities over \$21,000 in hospital maintenance.
4. Huntington's chorea is a medical responsibility in proper guidance of the unfortunate patient and a tremendous social responsibility in the management and care of its invalids.
5. Sterilization at governmental expense should be offered the children of Huntington's chorea patients.

BIBLIOGRAPHY

1. Selling, L. S.: *Synopsis of Neuropsychiatry*. St. Louis, Mosby, 1944, p. 194.
2. Keschner, Moses: *Huntington's Chorea*. *Tice's System of Medicine*, vol. x, p. 348. Hagerstown, Md., Pryor, 1937.

Iowa Methodist Hospital
CLINICOPATHOLOGIC
CONFERENCE

February 14, 1949

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Abstract of Clinical Record

A white, married, city-street-department employee, aged 68, entered the Iowa Methodist Hospital on Jan. 17, 1948, complaining of "lung infection" of one month's duration. One month prior to admission he began to notice excessive fatigue at the end of a day's work. Fever of as much as 103 F. recurred almost every evening. He continued to feel weak and tired, and developed a nonproductive cough. About two weeks before admission he was put to bed, but rest and a three day course of sulfonamide therapy did not bring improvement. A week later he noticed pain in his right anterior chest, aggravated by deep breathing. Although his appetite had been good, he had lost about 10 pounds in weight. He had noticed no nausea, vomiting, indigestion, gaseous distention, or abdominal pain; the bowels had been regular; he had had no bloody or tarry stools.

Past history.—In 1936 he was confined to bed for six months for inflammatory rheumatism. Since 1938, he had noticed slight dyspnea, unaccompanied by orthopnea, and intermittent minimal edema of his ankles. Slight nocturia and slight slowing of the urinary stream had persisted for several years. In July 1946 he had pneumonia, from which he recovered promptly. Afterwards, he felt well and worked regularly.

Physical examination.—Examination revealed a well developed, well nourished, elderly white male with a temperature of 100 F., not appearing acutely ill. Dullness to percussion was noted over the lower half of the right lung, together with absence of breath sounds and decreased tactile fremitus. The left pulmonary area was clear. The blood pressure was 135 systolic and 65 diastolic. The pulse was regular; its rate, 88. There was no demonstrable cardiac enlargement, and no murmurs were heard.

The smooth liver margin could be palpated just below the right costal margin. The spleen and other abdominal organs were not palpated. On rectal examination the sphincter tone was normal, and no masses were felt. The prostate was enlarged, grade 2, and not hard.

Laboratory findings.—The initial hemogram was erythrocytes, 5,240,000 per cu.mm.; hemoglobin, 16.1 gm. per cent; and leukocytes, 20,800 per cu.mm., with neutrophils 82 per cent, band cells 5 per cent, eosinophils 1 per cent, lymphocytes 10 per cent, and monocytes 2 per cent. The Kline and Kahn flocculation tests were reported negative, and urinalysis was negative for abnormal findings.

Radiographic findings.—A radiograph of the chest was reported to show "a dense shadow extending from the right hilus downward to obscure the medial border of the heart and the diaphragm. In the lateral view most of the density lies anteriorly just above the diaphragm and has the appearance of encapsulated fluid. There is a diffuse thickening of the pleura, posteriorly."

A kidney-ureter-bladder film showed the left kidney shadow to be obscured by intestinal contents. There was a Riedel's lobe of the liver. No opaque calculus was discerned.

Course.—The temperature fluctuated irregularly from normal to 101 F. Ten days of intensive penicillin therapy brought little improvement and was stopped when urticaria developed.

Thereafter, a consultant reported that he found dullness of the lower half of the right chest, posteriorly, with absent breath sounds in the same area. He reviewed the radiograph of the chest and felt that it revealed density of the right base suggestive of encapsulated fluid.

The tentative diagnosis was empyema of the right chest, but attempts at aspiration were unsuccessful. He was dismissed on January 31 to return in one week for further study.

Second admission.—Upon readmission on February 7, the patient stated that dyspnea was increased. Findings on examination of the chest were similar to those of the previous admission, but a resident in surgery interpreted them as evidencing consolidation or atelectasis of the right middle and/or right lower lobe. He noted diminished diaphragmatic excursion on the right. Again, findings in the cardiac and left pulmonary areas were negative. Enlarged lymph nodes were nowhere palpable. The liver and spleen were not enlarged. A palpable right kidney was noted to move on respiration. An electrocardiogram revealed no evidence of organic heart disease. The hemogram was erythrocytes, 3,970,000 per cu. mm.; hemoglobin, 12.8 gm. per cent; and leukocytes, 15,800 per cu.mm., with an unaltered differential count. The urine was again negative.

On Feb. 9, 1948, a radiologist reported that the area of opacity in the right lower anterior chest was much larger.

On Feb. 11, 1948, an operation was performed.

Analysis of Clinical Observations

Dr. Leon J. Galinsky (Internal Medicine): A man, 68 years of age, was admitted to the hospital in January 1948, complaining of fatigue, fever, cough, weight loss, and pain in the right side of the thorax. We are told that the pain was intensified by deep breathing, and we may assume that it had a pleuritic quality. His past medical history revealed an episode that was considered to be inflammatory rheumatism in 1936, some 12 years preceding the present admission. For 10 years he had suffered from slight dyspnea and occasional edema of the ankles. He had had a little nocturia, and there was some slowing of the urinary stream for several years. Most significant in the past history was the occurrence of pneumonia in the summer of 1946.

On admission, one was presented with an elderly male in a good state of preservation, without evidence of appreciable weight loss. His temperature exceeded 100 F. The important sign on physical examination was that of dullness at the base of the right chest, presumably posteriorly. There were absent breath sounds and decreased tactile fremitus in the lower half of the right lung. In spite of the history of inflammatory rheumatism, dyspnea, and edema of the ankles, the heart sounds were normal; there were no arrhythmia or murmurs. The liver was felt to be enlarged but smooth, and the prostate was also enlarged.

Significant laboratory observations were a normal red blood cell count and hemoglobin, and an elevated leukocyte count of 20,000, with a predominance of neutrophils, and with only 1 per cent eosinophils. The urine was negative. A radiograph was reported to show a dense shadow in the right base.

The patient had had a trial of sulfonamide therapy before he was hospitalized, and after his hospitalization he was given a course of penicillin therapy, to which there was no appreciable response. The clinical impression was, tentatively, one of encapsulated empyema, but this was not substantiated by repeated thoracentesis. He was allowed to leave the hospital after two weeks of study. When he returned a week later, he complained of increasing dyspnea, and there was evidence of impaired resonance in the base of the right chest. There were no enlarged lymph nodes palpable. The blood count showed a lowered hemoglobin to 12.8 gm. and a lowered red blood cell count to 3,900,000, while the leukocyte count remained elevated to about 15,000. The urine was negative. Chest x-ray examinations again revealed a density in the right base. May we see the films at this time?

Dr. Harold Peggs (Resident in Radiology): This film, taken elsewhere on July 31, 1946, shows a dense homogeneous opacity occupying the lower third of the right lung field. You will notice that the diaphragm appears elevated more than one would expect. The trachea appears to be deviated slightly to the right.



Fig. 1. Radiograph Showing Evidence of Consolidation of the Middle Lobe of Right Lung.

In the next film (Fig. 1), taken Jan. 19, 1948, you see a similar opacity in the same area, but greater in extent. It obscures the right diaphragm and the adjacent border of the cardiac silhouette. You do not see the trachea well, and, therefore, one is unable to determine whether or not it is deviated, although the cardiac border appears approximately in its usual location. On the lateral film, you observe that the area of opacity lies anteriorly above the diaphragm in approximately the region of the middle lobe or in that of the anterior portion of the lower lobe. Now it was implied that the increase in density on physical examination was posterior; this impression was probably dependent upon diffuse thickening of the pleura, evidence of which you observe posteriorly.

Films taken on February 9 reveal an increase in the extent of the opacity in the lateral projection.

Dr. Galinsky: There are certain characteristics demonstrated by the films that suggest several processes which may underlie the entity. Certainly, the shadow is suggestive of an encapsulated empyema; although it is rather large for it, the shadow does have the contours that one might expect. My present search is for two things:

one, for evidence of any decrease in the shadow following the pneumonia of July 1946; the other, for evidence of enlargement in the hilar area. Neither of these do I see.

Our first problem is to determine where the lesion is. Is it inside or outside the lung? On the basis of repeated failure to aspirate fluid, I believe that this is not a pleural phenomenon, not a pleural inflammation nor pleural exudate. I suspect that the radiographic changes represent a process inside the lung, not outside it—a process of long standing. I assume that we are dealing with a condition which existed from July 1946 through February 1948, more than a year and a half. Granting that the process is within the lung, we have two main choices, eliminating from consideration such possibilities as congenital lesions and vascular abnormalities. We must determine whether the condition is inflammatory or neoplastic.

The case for inflammation is rather good in that we have a patient who presented evidence of chronic sepsis with fatigue, fever and leukocytosis. Of chronic inflammatory processes within the lung, we may dismiss tuberculosis inasmuch as sputum studies are not mentioned in the protocol. Besides tubercle bacilli, there are other invaders of the lung, but they would probably be the sort that would respond to the chemotherapy administered.

However, my own leaning here is toward neoplasm with secondary inflammation. It is conditioned by the knowledge that we are seeing increasing numbers of pulmonary neoplasms, and that the man is in his late sixties. There are neoplasms of the lung which are rapidly growing, and there are others which are much slower in their development. In this instance, obviously, if it was a year and one-half in its duration, the process was very slow. The most common lesion under such circumstances, and I think the most likely here, is bronchial neoplasm, involving largely the right middle lobe bronchus, with secondary consolidation of the middle lobe and possibly part of the right lower lobe. Therefore, the operation, I should think, was one of resection for pulmonary neoplasm. I would also say, if pressed, that the type of neoplasm most likely to be encountered, in view of the long duration, would be a fairly well differentiated squamous cell (epidermoid) carcinoma.

Dr. R. F. Birge (Pathology): Both the biopsy and the washings obtained at bronchoscopy on February 11 were positive for squamous cell carcinoma, grade 3.

On February 16, Dr. Dorner resected the man's right lung.

Clinical Diagnosis

Bronchogenic carcinoma.

Pulmonary atelectasis and chronic pneumonitis, secondary to neoplastic bronchial obstruction.

Dr. Galinsky's Diagnosis

Bronchogenic carcinoma, probably squamous cell carcinoma.

Pulmonary atelectasis and chronic pneumonitis, secondary to neoplastic bronchial obstruction.

Postoperative Diagnosis

Early squamous cell carcinoma, grade 3, of the right bronchus.

Atelectasis and chronic pneumonitis, secondary to neoplastic bronchial obstruction, of the middle lobe and contiguous lower lobe of the right lung.

Discussion

Dr. R. A. Dorner (Surgery): When, during his second admission, I first saw this patient, it seemed probable that he had atelectasis distal to an obstructing bronchogenic carcinoma. Empyema seemed unlikely because several thoracenteses had been unsuccessful. The x-ray shadow was consistent with atelectasis.

You will recall that the upper lobe bronchus comes off at a right angle to the right main stem bronchus; then the main stem bronchus continues downward bifurcating into the middle lobe bronchus, anteriorly, and the lower lobe bronchus, posteriorly. Therefore, I felt rather certain that, if we were dealing with a carcinoma, we would be able to demonstrate it by bronchoscopy. The examination revealed a neoplasm in the right main stem bronchus above the bifurcation of its middle and lower lobe branches.

Now, we were dealing with a 68 year old man who gave a history of orthopnea and edema of the ankles. He had been going downhill because of a suppurative inflammatory process in the lung. Most of the literature indicates that patients who have carcinoma of the lung die within four to eight months after the diagnosis is established if nothing is done about it, partly because of bronchial blocking with abscess formation within the lung. We therefore felt that, even though the patient was not too good a risk, surgery was strongly indicated.

The pneumonectomy went smoothly. There were numerous adhesions about the lower and middle lobes. The firmness of the lower and middle lobes, due to suppuration, made the exposure difficult and necessitated frequent tracheal suction during the operation. There was evidence of considerable pus still in the trachea at the completion of surgery, so an immediate bronchoscopic aspiration was carried out. This procedure is now almost routine following pulmonary

resection. On occasions it has been a life-saving procedure.

The man was discharged from the hospital on his fourteenth postoperative day and has been followed with frequent checkups. Since his convalescence, he has lost a little weight and has had a number of respiratory infections. He complains occasionally of pain in the chest. Two weeks ago I could find no evidence of metastasis, but I cannot say that he will not die of metastasis or of cor pulmonale. I do feel that we have given him at least eight months of useful living over and above what he might have had without pneumonectomy.

We had planned to have the patient here tonight, but he could not come. However, I would like to present to you a 61 year old man on whom I operated at the University Hospital, in Iowa City, in July 1947, for a quite similar lesion. Prior to operation he was very sick, and I told him that he would probably not live more than three or four months if we did not take out his lung.

First, I would like to have you guess which lung I took out. You see that there is no deformity. Many people won't believe him when he tells them that he is a "one-lunger." Pneumonectomy is not deforming. We resect one rib. Postoperatively, the chest fills up with fluid that later solidifies. In some patients we get a quite marked mediastinal shift. This patient's heart is over a little, but his trachea is in the midline. He has experienced no dyspnea and has been working fairly regularly.

Returning to tonight's case, the postoperative film made on June 12 shows the chest completely obliterated by fluid which is now probably completely solidified. There is slight tracheal shift to the right, and the patient may develop emphysema which will cause him difficulty. However, his prognosis, based upon the observations of the pathologist, is unusually good.

Report of Pathologic Findings

Dr. Birge: I will demonstrate our observations in this case by means of color transparencies. The first slide (Fig. 2) is a photograph of the hilar

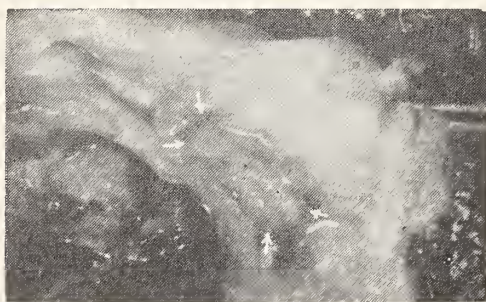


Fig. 2. Right Bronchus, Opened, Showing Early Polypoid Carcinoma.

region of the right lung. The bronchi are opened, and you see a polypoid neoplasm of the right bronchus. It completely obstructs the right middle lobe bronchus and partially obstructs the right lower lobe bronchus. It measures about 1.5 cm. in longitudinal diameter.

The neoplasm was limited to the mucosa and submucosa; it was well separated by stroma from the bronchial cartilages. Sections taken of adjacent tissues and of the regional lymph nodes demonstrated no evidence of extension or metastasis. Therefore, I agree with Dr. Dorner that the prognosis is favorable in this instance.

Recently in Des Moines several unusually early bronchogenic carcinomas have been successfully operated upon. This is a tribute to the clinicians of this area who are learning to be suspicious of the presence of primary lung cancer. The current case well illustrates the extreme importance in differential diagnosis of considering bronchogenic carcinoma when persistent pulmonary symptoms are present, and when radiographic findings similar to those of this case are present.

It is perhaps fortunate that a small carcinoma, such as this one, can obstruct a bronchus and produce inflammatory and atelectatic changes in the lung. Such a lesion calls attention to itself at times quite early. The danger signs must not be ignored.

The next slide illustrates massive consolidation of the middle lobe and contiguous part of the lower lobe, as characterized by lack of crepitation, marked increase in consistency, and a peculiar mottled appearance. The obstructed bronchi were filled with purulent material. Microscopically, there were all sorts of inflammatory changes, from chronic inflammation with fibrosis to abscess formation and subacute bronchitis.

It seems to be a general impression that bronchogenic carcinomas are unusually rapidly progressive cancers. This is not always so. The undifferentiated ones undoubtedly progress very rapidly in many instances. Many of the squamous cell carcinomas (Fig. 3), which this case exemplifies, are more slowly progressive. Thus, in many instances of bronchogenic carcinoma there is opportunity for the alert clinician to institute successful treatment if he makes the diagnosis when he should.

The pictures of another case well illustrate the rather slow progression of a bronchogenic carcinoma of squamous cell type. It is unfortunate that I cannot show you the radiographs, for the case is particularly interesting in view of the fact that serial x-ray studies were made over a period of two and one-half years. In 1940 a physician first observed in a routine x-ray film a small area

of consolidation in the upper lobe of the left lung. He warned his patient that the lesion might be a cancer, but the thought of possible pneu-



Fig. 3. Squamous Cell Carcinoma, Grade 3 (x 75).

monectomy seemed so formidable at that time to both the patient and the physician that nothing was done except to accumulate an interesting series of radiographs. The physician observed the lesion to enlarge slowly until it reached the size you see it here. It is a roughly globular mass which measures 8 cm. in diameter. The patient had few symptoms and little pain due to the presence of this neoplasm. He did not die of carcinoma, as you will see.

The next picture (Fig. 4) depicts the opened trachea and bronchi. You observe a small mass of necrotic tumor tissue protruding into the main stem bronchus on the left. You can, by viewing the picture, appreciate that it is possible at times for the bronchoscopist to visualize a carcinoma and to obtain a biopsy.

This patient died of massive hemorrhage from a large, deeply penetrating, benign gastric ulcer. There were multiple diverticula of the sigmoid colon. There was a large peridiverticular abscess filled with pale gray-green pus. The portal vein was filled with similar purulent material. There were numerous liver abscesses. In the common duct a large gallstone was found.

In tonight's case, Dr. Hess, the patient's physician, early suspected carcinoma. I would like to ask him for comment.

Comment

Dr. John Hess (Internal Medicine): The patient had pneumonia in 1936. I wonder if he had cancer in 1936.

Because interval x-rays were not shown, you have gained the impression that the pulmonary findings did not clear up following the episode in July 1946. Actually, an x-ray, taken elsewhere, showed that the chest did clear up.

Dr. Birge: Frankly, I do not believe that the carcinoma was present in 1936, or even in July 1946, because of the lack of extension encountered in the surgical specimen. It seems more likely that it arose in a site of previous inflammatory damage, possibly in an area of squamous epithelial metaplasia of the bronchial epithelium.

Because of the inaccessibility of pulmonary neoplasms, diagnosis is sometimes dependent upon cytologic study alone. In this particular case diagnosis was readily established. At bronchoscopy a biopsy was obtained. Moreover, the bronchus was rinsed out with normal saline, and the aspirated fluid was sent to the pathologist for examination. We were able to demonstrate carcinoma tissue in both the biopsy and the bronchial washings. However, if the biopsy had been negative, we could have proceeded confidently with surgery on the basis of the study of the aspirated material alone.

Much progress is being made in the diagnosis of cancer by study of sputum and bronchial aspirations. We¹ have developed our own method of handling such material. Dr. K. R. Cross, pathologist at the Veterans Hospital in Des Moines, has had excellent experience of this kind. I refer you to a recent article by Woolner and

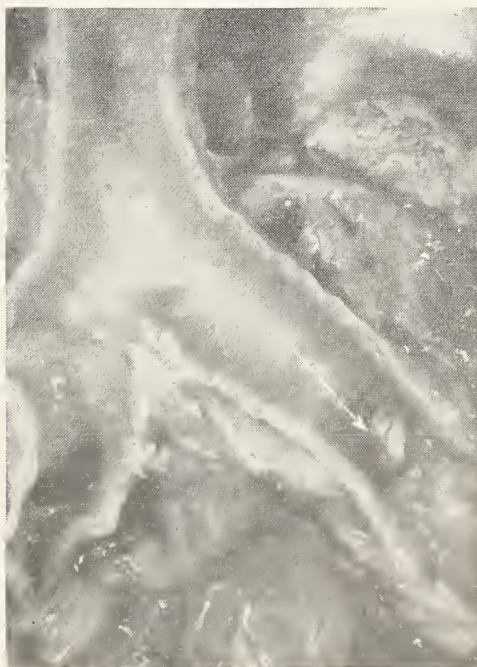


Fig. 4. Opened Trachea and Bronchi of Another Case. Note the necrotic neoplastic tissue protruding into the left bronchus where it could be readily observed at bronchoscopy.

McDonald² for a splendid report of the work in this field at the Mayo Clinic.

Dr. Merkel, you have performed bronchoscopy in most of the bronchial carcinoma cases seen here and at Veterans Hospital recently. Will you comment?

Dr. Byron M. Merkel (Otolaryngology): In many cases, such as those presented tonight, the neoplasm is situated in the right or left main bronchus, or close enough to the orifice of a secondary bronchus to be visible by endoscopic examination. However, there are certain definite limitations, mostly of a mechanical nature, in examination of the trachea and bronchi through the bronchoscope. We have retrograde and right angle telescopes which enable us to practically "look around the corner," but, even with these aids, the fact remains that certain tumors will be situated so far peripherally that they cannot be visualized. In this type of case a small aspirator can often be introduced into the segmental division in question; saline washings can be made of the suspicious area, and cells collected and studied for evidence of malignancy. We try to supply the pathologist with an accurate description of the sites from which biopsies or cell-washings are taken, and to give him all other information pertinent to his study.

We have had several cases in which neoplasia was not demonstrable on microscopic examination of tissue removed by conventional biopsy, yet in which the diagnosis could be made by the finding of clumps of carcinoma cells in the washings. This finding of carcinoma tissue fragments in aspirated material often makes the study one of histopathology, and the examiner is not limited to the cytopathology upon which Papanicolaou based his original reports.

In one such case, the tumor was just beginning to press on the lower lobe bronchi. After a representative biopsy was taken, we followed our routine of washing the area with saline solution. I looked at the biopsy sections and agreed with the pathologist that they did not show neoplastic tissue. However, the evidence of carcinoma was clearly apparent in the bronchial washings.

The pathologists tell us that the actual histopathology involved often removes some of the uncertainty associated with a diagnosis based solely on cytopathology. We feel, therefore, that it is important to routinely wash, or at least aspirate, secretions from a suspected area immediately after biopsy is taken. In many cases it is also advisable to obtain separate specimens of bronchial secretions from different areas.

Furthermore, may I emphasize that a negative biopsy or cell study by no means rules out carcinoma. Repeated examination is often necessary to prove or disprove the existence of a malignant neoplasm.

Dr. Birge: May we hear again from the radiologists?

Dr. Peggs: Rubin and Rubin³ state that, at the Montefiore Hospital in New York, it was found that 15 per cent of 333 patients lived for more than two years with carcinoma of the lung. It behooves us all to watch for carcinoma in patients having pneumonia recurring in the same place from time to time. A small carcinoma may be so situated in a bronchus that it acts as a ball-valve, much as does a mucous plug, to produce pneumonic involvement distally.

The findings on x-ray study of carcinoma of the lung are usually those of bronchial obstruction, manifested as atelectasis with secondary pneumonitis. However, one occasionally finds evidence of local emphysema due to trapping of air distal to a lesion.

Dr. John C. Parsons (Internal Medicine): Carcinoma of the lung is becoming more prevalent, not only apparently but actually. The apparent increase is due, no doubt, to the fact that laymen and doctors are becoming more and more prone to think of carcinoma. There is also an actual increase. Several years ago, a Boston physician told me they had three traffic policemen in the hospital at the same time with carcinoma of the lung. As you would suspect, they were taking samples of the air to see if its volatile hydrocarbon content might be the carcinogenic agent. As far as I know, nothing came of this investigation.

Carcinoma of the lung is about equal in incidence to carcinoma of the stomach, each running about 7 to 8 per cent of the totals.

In order to make a diagnosis of carcinoma of the lung, you must be suspicious of a chronic cough, an "unresolved pneumonia," a small area of fluid or of atelectasis as seen in an x-ray film. All may denote carcinoma of the lung. The doctor who first sees the case should be the one to be critical of the possible diagnosis.

BIBLIOGRAPHY

1. Birge, R. F.; McMullen, T.; and Davis, S. K.: Rapid method for paraffin section study of exfoliated neoplastic cells in bodily fluids. *Am.J.Clin.Path.*, xviii:754 (September) 1948.
2. Woolner, L. B.; and McDonald, J. R.: Diagnosis of carcinoma of lung; value of cytologic study of sputum and bronchial secretions. *J.A.M.A.*, cxxxix:497-502 (Feb. 19) 1949.
3. Rubin, E. H.; and Rubin, Morris: *Diseases of the Chest*. Philadelphia, W. B. Saunders Company, 1947, p. 470.

STATE DEPARTMENT OF HEALTH



NEW STREAM POLLUTION LAW Effective July 4, 1949

Iowa is ahead of many states in the passage of a new stream and lake pollution law giving the State Department of Health power to prevent pollution of our lakes and streams before it occurs. The law became effective July 4, 1949.

Specifically, the law states that a permit must be issued before the building of a new sewer, an extension to an existing sewerage system, or a change is made in an existing treatment plant which will empty into a stream or lake. This also applies to sewage from residences or any other building discharging into a stream or into a drain which leads to a stream. It does not apply to individual connections to an existing sanitary sewer except in the case of industries adding new sewers.

In addition to requiring treatment of domestic sewage, it also requires planning for proper disposal of pollutorial industrial wastes before they are produced. Before an extension or addition is made to any factory, manufacturing establishment, or business enterprise which would cause a substantial increase in the industrial wastes discharging into an existing treatment plant or directly into a stream, a permit must be obtained from the State Department of Health.

Experience has indicated that sewerage systems which have been designed according to accepted standards have been made to carry additional loads without regard for the capacity of the plant. When the plants are overloaded the necessary treatment is not possible; aquatic life in the lakes and streams is affected, and the water may be unsafe for use as a public supply.

The new stream and lake pollution law was recently enacted by the General Assembly of Iowa, mainly to prevent new pollution from going into our streams, lakes or other bodies of water. The original law controlling stream pollution did not authorize the State Department of Health to prevent new pollution, but merely to clean up the pollutorial condition after it had occurred.

Another portion of the law prohibits the discharge of treated or untreated sewage into any

state owned lake and requires a permit from the State Department of Health and the State Conservation Commission for the discharge of treated sewage into a stream tributary to a lake.

The new law will require additional trained sanitary engineers to work with municipalities, industries and individuals who contemplate the installation of new sewers, changes in existing sewerage systems, or expansions of certain industrial operations which will create conditions of stream pollution.

It is hoped that the public will cooperate in enforcing the spirit of the new law for cleaner streams and lakes in Iowa.

Plans and specifications with complete design data for new sewers, extensions, or changes to existing treatment plants must be submitted to the Department of Health for review before a permit can be issued. Likewise, data on pollutorial wastes to be produced by new industrial operations or expansions of existing waste-producing operations will be required before a permit can be issued.

Application forms for permits are obtainable from the Iowa State Department of Health, Division of Public Health Engineering, at Des Moines, or any of the offices of District Health Services, located at Decorah, Spencer, Fort Dodge, Council Bluffs, Washington, Manchester, Centerville and Burlington.

FLIES AND POLIOMYELITIS

Re: Communication from
U.S. Public Health Service
on Flies and Poliomyelitis

The following statement was received within the last few days from the U.S. Public Health Service:

"FEDERAL SECURITY AGENCY

Public Health Service,

Communicable Disease Center

605 Volunteer Building, Atlanta 3, Georgia

"1. Efforts to abate poliomyelitis epidemics by intensive fly control have given little promise of success or of proving or disproving the proposition that flies are an important means of transmitting poliomyelitis. For the present it does not appear

justified for the Public Health Service or other public health agencies to engage in emergency fly control activities during epidemics of poliomyelitis to learn more about the role of flies in the dissemination of this disease. More exact scientific investigations on this point are necessary.

"2. The Service does not discourage fly control, rather it encourages such activity when done on a rational and continuing basis. The spectacular work by airplane and ground machines, as has been carried on during emergencies, however, gives an unjustified feeling of security and diverts attention from other possible sources of poliomyelitis spread.

"3. As a result of experimental work, the following facts are known concerning fly transmission of poliomyelitis:

"a. Poliomyelitis virus can be found for considerable periods of time in the stools of infected persons and in sewage containing such stools.

"b. Poliomyelitis virus has been isolated from flies (blow flies and house flies) during epidemics.

"c. The infection of experimental animals by the ingestion of materials containing poliomyelitis virus has been demonstrated on numerous occasions.

"d. It has been shown once (not repeated) that flies in the home of a case of poliomyelitis became contaminated naturally with poliomyelitis virus and conveyed enough of it to food which had no other contact with virus, so that poliomyelitis-free chimpanzees developed infections of poliomyelitis shortly after eating contaminated food.

"The above indicates that flies can transmit poliomyelitis. It does not show how frequently this happens; it does not exclude other means of transmission; nor does it indicate how important fly transmission is in comparison with other means of transmission.

"4. In an attempt to settle the question of the importance of flies as vectors of poliomyelitis, the Public Health Service is now planning to cooperate with five communities located in selected portions of the country, in effecting practicable year 'round fly control for a period of five or more years. These cities have been selected on the basis of (1) size, (2) recent freedom from poliomyelitis epidemics, (3) relatively high reported infant death rates from diarrhea and dysentery during the summer, and (4) ability and inclination to cooperate in fly abatement activities. The poliomyelitis experience subsequent to the beginning of control operations of these test cities will be compared with that of similar nearby cities without high grade fly control to see whether or not fly reduction protects city populations from poliomyelitis epidemics.

"a. Because so little is known about different types of domestic flies and their habits, the first summer in each of these test cities was spent in entomological study and determination of population densities of the flies involved. This also serves as a base line against which the effectiveness of fly control may be gauged.

"b. Due to the mass hysteria which may be generated by such publicity, it is considered inadvisable to identify these projects directly with poliomyelitis. Community fly control is always encouraged by the Public Health Service as an environmental sanitary measure.

"c. The National Foundation for Infantile Paralysis, Inc., participated in the planning of this study and through its research program is conducting laboratory studies on certain problems connected with them."

These statements concur with the attitude of the Iowa State Department of Health, as expressed in connection with the state-wide fly control program.

Miss Olive Johnson has recently been appointed to the position of consultant nurse in the Division of Preventable Diseases and Venereal Disease Control of the State Department of Health after having served for seven years as nurse supervisor in the District Health Service No. 11, Council Bluffs and southwest Iowa.

Miss Johnson received a Bachelor of Science degree in education from the University of Michigan, in 1940, and recently has done special work in preventable diseases at the University of Minnesota.

Miss Johnson's services are available to all nursing groups in Iowa in planning and carrying out communicable and venereal disease programs.

Dr. Stanley L. Hendricks was recently appointed as public health veterinarian in the State Department of Health's Division of Preventable Diseases.

Working with Dr. Ralph H. Heeren, division head, Dr. Hendricks, who is a graduate of the Veterinary Division of Iowa State College, will devote special attention to diseases of animals which are transmissible to man. Such diseases include brucellosis, rabies, trichinosis, tularemia and equine encephalitis.

Following his graduation from Iowa State College in 1934, Dr. Hendricks was employed by the U. S. Bureau of Animal Industry, practiced veterinary medicine in Wisconsin, and since 1940 has been a member of the Milwaukee City Health Department. He spent five years in the Veterinary Corps of the U. S. Army, from which he was discharged as a lieutenant colonel.

The JOURNAL of the Iowa State Medical Society

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New Contract with the Veterans Administration

Effective August 1, the Iowa State Medical Society will enter into a new contract with the Veterans Administration for the "home town medical care" program. A copy of the new fee schedule and an explanation of the changes being made have been sent to every physician in Iowa in the hope that the change over can be made smoothly.

The new contract will cover the same procedures as the old one, which is to say it still does not go into fees for operative procedures. Most of these are not being done outside the Veterans Hospitals, however, and so there is no great need for a fee schedule covering them. A few changes have been made, but the average on the whole is increased rather than decreased. The mileage rate has been raised to \$1.00 per mile from the 75 cents it has been.

One new rule which may cause initial confusion is that when a physician makes more than one examination on a veteran concurrently he will not be paid the full fee for each examination but instead will receive the full fee for the greater amount, plus one-half the fee for the smaller. It sometimes happens that a veteran who has authorization for a general physical and an orthopedic examination will ask the orthopedic physician to make both examinations. If the specialist does make the general physical examination, in addition to the one in his specialty, he will be paid only one-half the fee for the general physical examination. The reason behind this is that the program

is designed to have each physician stay within his specialty.

Fees for psychiatric and neurologic examinations and treatment have been changed because of experience accumulated over the county. It has been found that in some communities the specialists are not devoting an hour to the examinations and yet are being paid for an hour and a half. The new schedule bases payment first on an hour's work, then by half-hour periods. If the physician takes an hour and a half, or two hours, to make the examination, he will be paid for his time, but if he takes less than an hour his payment will be reckoned on that basis instead of as heretofore.

The state committee on veterans affairs has been active in working with the Veterans Administration on many details of the program. From time to time it has met to review rejections and to iron out differences of opinion in regard to the contract. As might be expected, some of the examinations which were rejected were found to be inadequate by the committee, just as they had been by the Veterans Administration; others were felt to be suitable, and the Veterans Administration accepted the judgment of the committee in these instances. For the sake of the record, it should be said that the State Medical Society has received the best kind of cooperation from the Veterans Administration, and it has been a pleasure to meet with its officers to deal with mutual problems.

Since the program started some two and a half years ago, Iowa doctors have received \$488,224.00 in payment for services rendered. This is no small amount. The committee is most anxious that the program shall continue to function smoothly and effectively, because it is giving a real service to the veterans of the state at a cost far less than it could be obtained in veterans hospitals. It enables him to receive care at home, saves him varying lengths of hospitalization, and works for his general welfare. In the final analysis, it is his general welfare which is the main concern both of the doctors and the Veterans Administration, and that is what we want to remember in working out the new program.

Progress of the Educational Campaign

There's an old saying that people place more value on things which they have to buy themselves than on things which are free. It also follows that when an individual spends his money, he likes to know what he is getting for it.

The first of the year every doctor in the country was asked to pay \$25 to the American Medical Association so an educational campaign against compulsory health insurance might be conducted

on a broad scale. The response from Iowa physicians put it third in the nation in April; since then more assessments have been forwarded to Chicago. A progress report of expenditures should be of interest to members of the state society.

Reporting at the American Medical Association meeting in Atlantic City in June, Dr. L. H. Bauer said that since the program started over 1,000 organizations have gone on record as being opposed to compulsory health insurance. Among them are the American Federation of Women's Clubs, the American Bar Association, the American Farm Bureau, the National Fraternal Congress of America (including over 200 lodges), the National Catholic Welfare Conference, the National Conference of Catholic Charities, the Catholic Hospital Association, the American Protestant Hospital Association, and the American Legion.

On the national level, 25,000,000 pieces of literature have been mailed out to state and county societies, and 2,500,000 pieces have been mailed direct from Whitaker and Baxter, not to state associations. In addition, many radio talks, magazine articles, local speeches, and so on, have been directed from the national headquarters. (Physicians are urged to read the statements of Whitaker and Baxter in the June 25 issue of the *Journal of the American Medical Association*.)

On the state level, efforts have been made to cooperate with the national organization, and the central office has communicated with the officers of the county societies in endeavoring to stimulate activities at a local level. We in Iowa have not felt that local resolutions would be of too great value, but a letter was sent to all county medical societies in June asking that some time and energy be spent in this direction. We have distributed, since about the first of May, approximately 200,000 pieces of literature, as it became available. Samples were sent to all county society secretaries from the state office, and offerings were made to the county society secretaries to supply as many pamphlets as the doctors wanted. Some counties have asked to have the individual doctors contacted, and this was done in Webster and Black Hawk, while Polk County wrote its own members.

The state office has also contacted many insurance companies and supplied them an Iowa State Society filler. Several hundred thousand of these have been enclosed in insurance company mailings. The Polk County Woman's Auxiliary has one of the best organized campaigns of which the state office has learned, and it includes the distribution of pamphlets to various industries and offices in the counties. If there are other counties in the state whose health and accident associations or

Woman's Auxiliaries will aid in the distribution of pamphlets, the state office will be glad to supply them with material.

The Speakers Bureau has cooperated with the campaign, and, as a result, many talks on the subject of compulsory health insurance have been given. Cerro Gordo County has been very active in this type of educational program, and, in fact, was probably the first to start a large scale program. Black Hawk County has had a weekly radio program since May, and similar programs are under way in Scott and Webster Counties. The radio stations are providing public service time for the broadcasts, and the state office has scripts available for county societies. These have been prepared by the field secretary, and his help is available in preparing such a series of presentations. In other counties, distribution of information has been accomplished through the various hospitals, and hospital visitors who are interested have been urged to write their Congressmen. Help in writing the letter has been made available by some hospitals.

It is not possible to mention all of the activities being carried out in Iowa, but the above short resume should demonstrate that your officers and headquarters are endeavoring to cooperate with the national plan.

We know that there are many individual doctors who are doing a most effective job in talking to their patients and explaining the facts about the proposed national health program. Some have worked out novel ideas for pamphlet distribution; many others have talked to lay groups. Each man is urged to do the job in the way which fits him best, and every doctor should do his share. For a long time we have talked about lack of leadership at national headquarters, but such has now been provided. Some physicians feel that their contribution of money will replace their contribution of individual effort, but this is not true. We all will have to give both money and effort this year, and during the succeeding years. If we Iowa physicians will maintain the momentum of the national program at the local level, as well as we have responded by the national assessment, our record will be a good one.

High Utilization Experience of Blue Cross

Blue Cross and Blue Shield are tied together in many ways, and what affects one affects the other. The Iowa State Medical Society worked hand in hand with the Iowa Hospital Association in procuring enabling legislation to set up Blue Cross; doctors have served consistently on its board of directors; and each year the Iowa State Medical Society names a doctor to correspond to each

enrolled hospital, so that the medical profession has one member for every hospital member and consequently an equal number of votes at the annual meeting.

This year the question facing Blue Cross at its annual meeting was whether to raise rates or limit benefits, since some action was necessary to overcome the financial loss being incurred. Both hospitals and doctors were reluctant to take either step in view of the present pressure from Washington for compulsory health insurance, feeling that either action might encourage subscribers to favor the government's "free program." As an alternative, it was decided to analyze the types of cases being hospitalized to determine where the expense is being incurred.

Results of this analysis show two sources of possible abuse. One is in hospitalization for diagnostic purposes only. Blue Cross was never set up to provide diagnostic service; it was organized to take care of emergency hospital needs and the services which go with such needs. The premium necessary to cover diagnostic services would be practically as large as the services themselves and therefore impractical. The premium for the usual hospital service is more easily predictable and is a figure within the range of ordinary incomes.

The second possible source of abuse lies in the prescribing of costly drugs, laboratory services, oxygen, and physiotherapy, on which there is no limit set in the policy. Some of the charges made to Blue Cross for these services in the last year or so have been truly staggering.

Because the physician is the one who commits the patient to the hospital and also is responsible for prescribing for his needs while there, a letter was sent to the chief of staff of every hospital in the plan in May, with a request that the problem be placed before the medical staff and its help and advice solicited.

One of the first replies received from that letter is most heartening. The letter was discussed by the county medical society, and its reaction was that the whole plan of hospitalization insurance will be ruined if the present abuse continues. It felt that the physician must have the moral fortitude to tell his patient he is not entitled to diagnostic services under his contract, and that, since the physician is responsible for admitting the patient and prescribing for him while there, he should remember that, regardless of whether the patient has insurance or not, if his bill is too large, he will be more inclined to look with favor upon government insurance.

Under the Blue Cross plan, the physicians hold the whip hand. They can make or break it. Blue Cross does not, and cannot, do as the San Fran-

cisco compulsory plan did—*tell* the doctors how and what they can prescribe.

It goes without saying that we of the medical profession want to retain the voluntary insurance plans. Let us remember our responsibility in administering them, and, if your county or your hospital staff has not discussed this problem presented to you by Blue Cross, ask to have the letter read so that you may see what the issue is and determine how you may do your part in meeting it, because we are confident the medical profession will meet it.

Vitamin A Synthesis Accomplished

While the synthesis of most of the other important vitamins and their manufacture on a large scale has been accomplished during the last 20 years, failure has met the attempts to synthesize vitamin A, the fat-soluble vitamin necessary for growth, the normal function of the eye, and other physiologic needs of the body. A major reason for this lack of success was the instability of the molecule, its sensitivity to acids, light, and the oxygen of the air. Swiss Nobel prize winner Paul Karrer, of Zurich, in 1931, elucidated the structure of this complicated molecule, and, in 1936, an English chemist, Sir Ian Heilbron, made some headway in the synthesis, but even the pressure of the war needs for tremendous amounts of highly active vitamin A did not lead to a synthesis during the war years.

Meanwhile, the huge amounts of vitamin A required for therapeutic use and as a food supplement were obtained only from natural sources, especially from fish liver oils. Concentrates were obtained by elaborate methods of purification; however, even the purest commercial concentrates (with a purity of about 25 per cent) were unpleasantly characterized by a fishy odor and taste.

In the fall of 1947 announcements of the synthesis of vitamin A from various laboratories appeared almost simultaneously in Switzerland, Holland, and soon thereafter in the United States. However, the purity of these synthetic vitamin A concentrates was rather low, and many difficulties had to be overcome in the development from the laboratory to large scale industrial production before it could be made available to the consumer.

Recently, the synthesis of synthetic vitamin A acetate by a method suitable for industrial production was disclosed by a group of workers in the Warner Institute for Therapeutic Research, in New York, and described by the authors, Otto Schwarzkopf, H. J. Cahnmann, Arnold D. Lewis, John Swidinsky, and H. M. Wuest, in a recent

issue of the *Helvetica Chimica Acta*. Vitamin A was obtained without further purification of the end product with a purity of 50 to 75 per cent, a concentration which is higher than any of natural origin available commercially up to now. The synthesis is now performed on a sufficiently large scale to permit its use in pharmaceutical preparations, starting from beta ionone, and the first pharmaceutical product will be marketed in this country by William R. Warner & Co., Inc. The vitamin A gelatin capsules will be the smallest ever manufactured (with 25,000 U.S.P. units per capsule) and completely free from any fishy odor or taste. Complete identity between the natural and synthetic product has been established by chemical, physico-chemical, and biologic methods. Further work in the Warner Institute has shown that the small amount of inert material in the synthetic concentrates has no toxic effects.

Report of the House of Delegates of the American Medical Association

The House of Delegates of the American Medical Association was called to order on Monday morning, June 6, at 10 a.m., by the speaker, Dr. F. F. Borzell. After preliminary reports and actions, the Distinguished Service Award for the year was voted to Dr. Seale Harris, of Birmingham, Ala.

Dr. Borzell, in his address, called attention to the attacks which have been made upon the American Medical Association since the levying of the \$25 assessment and set forth again the principles involved in the issue. He called on the House to show by its deliberations "that the American medical profession, constituting the American Medical Association, is a completely democratic body, and that, when the House of Delegates speaks, it speaks for the vast majority of American physicians. It must further demonstrate more clearly than ever that its motivations spring solely from a sense of primary responsibility to insure for our people the maintenance of a quality of medical service equaled nowhere else in the world." In order to accomplish this, he recommended appointment for the session of a special committee of five members to serve as a committee on publicity. Above all, he called upon the members to retain a calm and considerate attitude so that irritations and indignation might not influence any decisions they might make.

Dr. Sensenich, president of the American Medical Association, stressed four specific things in his address. He discussed medical education with all of its ramifications complicating the picture, the importance of the work being done by the Council

on National Emergency Medical Service, the present status of legislation affecting the medical profession and the public, and the value of co-operating in the fields in which we can come to some agreement. He stressed the need for leadership and warned against compromise.

The report of the Board of Trustees was long, covering as it does many activities of the Association. The financial report showed that there was a profit of \$398,000 for the year, a welcome change from the deficit encountered in 1947.

At the St. Louis meeting the trustees were instructed to study the fee for life insurance examinations. This was delegated to the Bureau of Medical Economic Research, and its report was that there is no agency with which the matter might be negotiated, and so the House voted to send the report in full to county and state medical societies for their scrutiny.

The report of the Committee on Rural Health contained an 11 point program, which will be publicized and activated in Iowa through our own committee.

The report of the joint committee meeting with nurses and hospitals recommended that a permanent committee be retained to consider mutual problems; this was done.

The perennial question of hospitals entering into the practice of medicine was also a part of the trustees' report, and the conclusion was that it is a local problem and should be settled locally by applying well established rules.

A Code of Ethics has been proposed for the World Medical Association, and the trustees' report carried a summary of it, along with a declaration agreed upon at Geneva which reads as follows:

"At the time of being admitted as a member of the medical profession

I solemnly pledge myself to consecrate my life to the service of humanity.

I will give to my teachers the respect and gratitude which is their due;

I will practice my profession with conscience and dignity;

The health of my patient will be my first consideration;

I will respect the secrets which are confided in me;

I will maintain by all the means in my power the honor and the noble traditions of the medical profession;

My colleagues will be my brothers;

I will not permit considerations of religion, nationality, race, party politics or social standing to intervene between my duty and my patient;

I will maintain the utmost respect for human life, from the time of conception; even under threat,

I will not use my medical knowledge contrary to

the laws of humanity.

I make these promises solemnly, freely and upon my honor."

The report of the Council on Industrial Health contained an outline of how the eleventh plank in the A.M.A.'s 12 point program might be expanded. The trustees also amplified the 12 point program in their report.

Final item in the report of the Board of Trustees concerned the activities of the editor; this was reported in the July JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

Next report was that of the Council on Medical Service. It gave an up-to-date statement of the status of prepayment plans and next brought in specific recommendations as follows:

1. Approve complete and absolute separation of Associated Medical Care Plans from the American Medical Association and adopt the joint statement of the Board of Trustees and the Council on Medical Service as presented in the report of the Council.

2. Approve the tentative principles set up to guarantee good medical service to subscribers of lay-sponsored voluntary health plans. (This consists of 20 principles to be applied locally. Each state society will be provided with the principles to use within their state.)

3. Approve arrangements made at the suggestion of the Council with Whitaker and Baxter that the Council develop the positive phases of the National Education Campaign, principally the nation-wide promotion of the voluntary health insurance campaign on all fronts.

4. Approve the plan of action of this over-all campaign, using all the agencies portrayed in the Scientific Exhibit on "Voluntary Health Insurance," and in accord with the promotional program adopted by the Atlantic City June 4 conference of groups working in the voluntary health insurance field.

5. To carry out the recommendations and to further the effectiveness of the Council's correlating committees on prepayment hospital and medical service, extension of hospitals and other facilities, medical care of veterans, industrial workers, the indigent and children, and relations with lay-sponsored voluntary health plans; the Council further recommends that the House of Delegates approve the necessary increase of the Council's staff and personnel so that full time assistance may be available to forward the activities of the correlating committees, and an active program of field promotion may be instituted immediately to bring about increased enrollment through all approved voluntary health programs and plans in the shortest time possible.

The report of the Council on Medical Education and Hospitals covered the problem of displaced physicians' and recommended that it be authorized to classify foreign medical schools and inform state licensing boards of the standards prevailing in the different schools as a guide to li-

censure. It also submitted a revised text of the essentials for residency training in physical medicine and asked authority to amend its "Essentials for Approved Examining Boards."

The Council on Scientific Assembly asked that its membership be increased because of the increased load due to new sections and the interim meeting; this was done.

The Judicial Council brought before the House a revised Principles of Medical Ethics, which was adopted item by item. (This will be published later in full.)

Whitaker and Baxter reported in full on the educational campaign being conducted under the direction of the Coordinating Committee.

The report of the Council on National Emergency Medical Service announced the elevation of Surgeon General of the Army to make him direct medical advisor to the Chief of Staff and the Secretary of the Army. It also dealt with the establishment of a section on military medicine and surgery and the need for changes in the Constitution and By-Laws in order that the Air Force might be accorded the same privileges as the other branches of the armed forces.

Many resolutions were introduced. Naturally many of them were of similar nature and many, too, were in accord with council recommendations. One which received favorable consideration was for some type of membership in the American Medical Association for medical students. Another approved was one which called for a questionnaire to be sent out from headquarters to determine the actual sentiment of medical men throughout the country. Proponents of compulsory health insurance argue that the American Medical Association does not truly represent the medical men. The questionnaire proposed would give each doctor an opportunity to express his opinions freely and would so provide a true cross-section of feeling throughout the country.

National legislation was considered, and the House took a positive stand upon many of the pending bills. Notice of this action will be transmitted to county societies for their information.

Dr. Bauer reported on what had been accomplished by Whitaker and Baxter to date, that over 1,000 organizations are on record as being opposed to compulsory health insurance, over 25,000,000 pieces of literature have been mailed out, posters have been prepared and distributed, a letter explaining the program has been sent to every member of Congress, and the voluntary medical care plans have been assisted by the preparation and distribution of literature in addition to other activities.

The House approved a resolution on national defense as follows:

Resolved, That if and when it becomes clear to the Council on National Emergency Service that essential requirements of the Armed Forces cannot be met in any other way, it be authorized to develop a method of equitable selection from among V-12 and ASTP trained physicians, and those deferred from military service to complete their medical education, and that the method proposed be submitted

to the House of Delegates for its approval, except in an emergency when the Board of Trustees shall act on the proposal; and,

Be It Further Resolved, That the mechanism approved be submitted to the federal government for its consideration.

Election of officers (already reported) and selection of Chicago as the meeting place in 1952 were among the final actions of the House, which adjourned Thursday afternoon, June 9.

A testimonial luncheon was tendered Dr. Edward M. Myers at the Des Moines Club, Tuesday, July 12, 1949, at which time the following appreciation was presented to him:

PHOTOGRAPHS SOUGHT Of Witherwax, Lewis and Huntsman FOR HISTORICAL USE

Photographs of the following doctors are needed for historical purposes, to be included in the centennial volume, celebrating 100 years of medicine in Iowa:

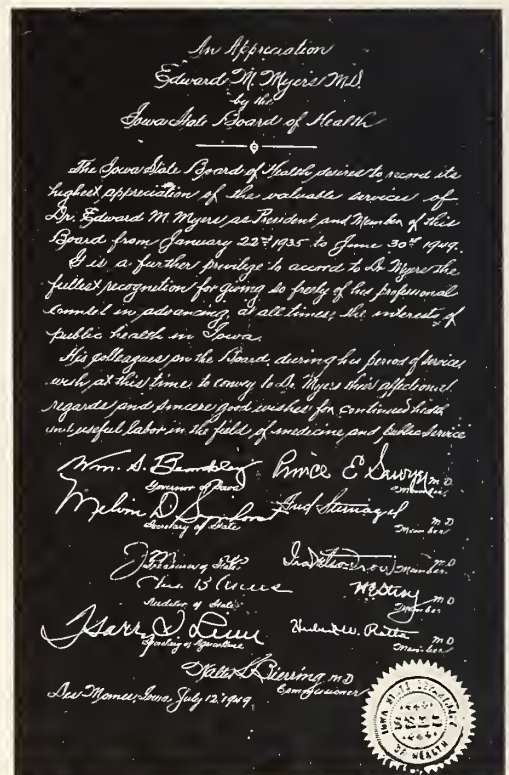
John M. Witherwax, M.D., of Davenport, 1811-1869, president of the Iowa State Medical Society in 1854.

Roland S. Lewis, M.D., of Dubuque, 1810-1869, president in 1861.

Henry Clay Huntsman, M.D., of Oskaloosa, 1825-1887, president in 1854.

It is urgently requested that anyone having a photograph of any of these doctors, or knowing where one might be located, or knowing members of the family who might have one or know of one, please communicate with Dr. Jeannette-Dean Throckmorton, Medical Library, Historical Building, Des Moines. Photographs will be returned, unless it is desired to present them to the Medical Library.

Under the direction of the Historical Committee, headed by Dr. Bierring, a centennial volume, *History of Medicine in Iowa*, is being prepared for publication in the spring of 1950, as many of you know. One copy will be distributed free to each member of the State Society, but, having recently received an order for seven extra copies from one doctor, it is thought that many other physicians throughout the state may wish extra copies. Especially the families of early pioneer doctors, as well as those physicians who have themselves held a prominent role in Iowa medicine in more recent times, will be interested in ordering extra copies for members of their families and friends. An attractive, well bound book of about 400 pages, including pictures of all the State Society presidents, of early medical schools and hospitals, as well as more recent ones, the cost of extra copies will be only \$2.50 each. Extra copies, however, will not be purchasable unless they are ordered previous to publication. Address No. HC100, The Journal of the Iowa State Medical Society, 505 Bankers Trust Building, Des Moines 9, Iowa.



MORBIDITY REPORT

Diseases	June '49	May '49	June '48	Most Cases Reported From:
Diphtheria	0	3	10	
Typhoid Fever	0	0	3	
Scarlet Fever	26	49	57	Black Hawk, Bremer, Delaware
Smallpox	0	0	0	
Measles	312	386	409	Polk, Story, Winnebago
Whooping Cough ..	9	10	19	Des Moines, scattered
Prurcellosis	32	29	31	Butler, Cerro Gordo, Linn, Sioux, Mahaska
Chickenpox	145	279	186	Black Hawk, Bremer, Dubuque
German Measles ...	16	209	1	Des Moines, Dubuque, Johnson
Influenza	0	0	0	
Meningitis Meng. ..	1	2	4	Cerro Gordo
Mumps	197	329	191	Black Hawk, Boone, Delaware, Dubuque
Pneumonia	4	9	9	Hancock, Polk (2), Pottawattamie
Poliomyelitis	16	2	36	Calhoun, Cerro Gordo, Webster
Rabies in Animals..	24	37		Polk, Jones, Dallas, Wright
Tuberculosis	86	79	55	For the State
Gonorrhea	63	65	86	For the State
Syphilis	179	186	124	For the State

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WALTER L. BIERRING, Des Moines, *Chairman*

DR. JOHN T. McCLINTOCK, Iowa City, *Secretary*

DR. CLYDE A. HENRY, Farson

DR. JEANNETTE DEAN-THROCKMORTON, Des Moines

DR. CHARLES L. JONES, Gilmore City

DR. LESTER C. KERN, Waverly

DR. EVERETT M. GEORGE, Des Moines

MAYO HAMILTON SOLEY, M.D. 1907-1949

An Appreciation

The many friends of Dr. Mayo H. Soley in Iowa and throughout the medical world were deeply grieved by his sudden death at Iowa City on June twenty-first. He had been with us but a short year, yet he won our highest regard and sincere admiration for his attractive personality, rare intellect, and clinical acumen. He came to Iowa from the University of California Medical School, where his clinical studies on the use of radioactive iodine in thyroid disease and other fields of pharmacology research had gained for him the widest recognition.

Dr. Soley was born in Malden, Mass., April 14, 1907. After receiving his bachelor of science degree at Bowdoin College in 1929, he entered the Harvard University Medical School and was granted the degree of Doctor of Medicine in 1933. Following graduation, he served as house officer in the medical service of Massachusetts General Hospital, Boston, from 1933 to 1935. He then was attracted to the University of California Medical School, where he served successively as special graduate student in medicine, research assistant in medicine, instructor in physiology, instructor in medicine and pharmacology and assistant professor of medicine and pharmacology. In 1942 he became chairman of the Division of Pharmacology, and associate professor of medicine, serving until 1947 when he was elected professor of medicine. During this period he held clinical appointments as assistant physician and consulting pharmacologist to the University of California Hospital, the San Francisco Hospital, the Langley Porter Clinic, and the Letterman General Hospital, U. S. Army, San Francisco. From July 1, 1944, to June 30, 1948, he served as assistant dean of the University of California Medical School, in which capacity he showed superior administrative ability. This experience, with his other eminent qualities of leadership, brought him to the University of Iowa as dean of the medical school and professor of research medicine on July 1, 1948.

His extensive society affiliations are significant recognition of his professional attainments at the young age of 42 years. These included membership in the California Academy of Medicine, California Medical Association, California Heart Association, American Association for the Study of Goitre, American Federation of Clinical Research, American Heart Association, American Medical Association, American Society for Clinical



cal Investigation, American Physiological Society, Association of American Physicians, American College of Physicians, Association for the Study of Internal Secretions, Central Interurban Clinical Club, Society for Experimental Biology and Medicine, and Western Society for Clinical Research. He was a member of Alpha Kappa Kappa and Beta Theta Phi fraternities and of the honor scientific society Sigma Xi. On May 5, 1949, at a special ceremony, the Alpha Chapter, University of Iowa, conferred on Dean Soley the cer-

tificate of honorary membership in Alpha Omega Alpha Honor Medical Society.

He was associate editor of *California Medicine* from 1946 to 1948.

During the last year he became a member of the Johnson County and Iowa State Medical Societies, and the Iowa Heart Association.

Dean Soley appeared frequently before county societies, as well as the Iowa State Medical and Tuberculosis Associations, and everywhere left the impress of a sound investigator, inspiring teacher, and fine clinician.

He entered upon his administrative duties as dean with enthusiasm and in a short period had overcome great difficulties of organization and adjustment of the University Medical School to meet the needs of a changing modern social order.

Dr. Soley's wife, the former Karolina B. Jump, is also a doctor, being a 1930 graduate of the University of California Medical School. To her and their three children, Mayo Robert, 7; Charles Hamilton, 4; and Jane Elizabeth, 1½, we extend our deepest sympathy.

We will treasure the privilege of his fellowship, his inspiring personality, and his contribution to our medical school.

WALTER L. BIERRING

It seems fitting to add a tribute expressed by Dr. Chauncey D. Leake, vice president, Medical Branch, University of Texas, and formerly professor of pharmacology and faculty colleague of Doctor Soley in the University of California, as follows:

It was my privilege to recommend Dr. Soley as my successor when I left the Pharmacology Laboratory at the University of California Medical Center in 1942. He had come to the University of California from Harvard and the Massachusetts General Hospital in 1935 as instructor in medicine. He became assistant professor of pharmacology in 1938, following his brilliant researches on anxiety states, iodine metabolism, and hyperventilation.

Dr. Soley's outstanding character and his cheerful and inspiring leadership made him popular with students and staff. He became assistant dean and showed a remarkable ability in medical administration. It was this which was recognized by the University of Iowa College of Medicine. His was an enthusiastic leadership, and his loyalties were always with those with whom he worked. As Dr. William B. Bean of the Department of Internal Medicine of the University of Iowa College of Medicine says, "Bringing with him the commingled pride and reserve of a New England heritage to which was added the enthusiasm of the West Coast, he epitomized the traits which have given greatness and luster to the nation."

In every respect Mayo Soley illustrated the grace, skill and high character of the true gentleman.

Respect for his memory can best be shown by increased devotion to the ideals for which he stood.

"A Very Parfit Gentil Knight"

(William Bennett Bean, head of the Department of Internal Medicine, here pays tribute to his late friend and associate, Dean Mayo H. Soley of the College of Medicine.)*

Mayo Soley came to us with the fervor of high ideals and hopes, that he might supply the College of Medicine in Iowa with the leadership needed to attain excellence worthy of the people of the mid-country of our land. Bringing with him the commingled pride and reserve of a New England heritage to which was added the enthusiasm of the West Coast, he epitomized the traits which have given greatness and luster to the nation.

He had achieved distinction as a physician. He had done imaginative research of high originality as a student of the processes of disease. He had made his mark in the field of medical school administration.

Motivated by a profound feeling for the patient and the student, the warmth of his presence made him a sympathetic teacher. Because he was always a student he was a superb clinician. His leadership was recognized by membership in the significant medical societies, and service on national committees and editorial boards.

But this array of notable attainments is only the cold list of what a stranger might say in tribute. His warmth and color gave to them a meaning which kept him high in the affectionate regard of his fellows.

He was the cherished center of a devoted family. He was a thoughtful and devoted friend. There was about him the style and elegance of the sunny side of the hill on a spring day. His energy and enterprise found outlets in varied sports in which he went beyond proficiency, for he was satisfied with nothing short of perfection.

Into everything he put a prodigy of effort, carrying on his multitudinous tasks with verve and buoyancy. With high sense of duty, sound scholarship, keen intellect and ready wit he had at his command the mass of detail needed to direct a college of medicine. What he had achieved in the face of innumerable difficulties in one short year had won for him not only respect and admiration but the sympathetic support of his associates.

With such qualities and character he brings to mind the grace and skill, elan and many-sidedness of the Elizabethan gentleman. Beyond anyone's thought he was impatient of delay and drove himself relentlessly but without bitterness to reach his goal. With so much of the path traversed he was suddenly overwhelmed, a martyr to his own idealism.

"He was a very parfit gentil knight."

*Daily Iowan, Saturday, June 25, 1949.

NEWS NOTES

from the

Committee on Medical Service and Public Relations

• Nebraska Medical, Press and Radio Conference

The Nebraska State Medical Association followed the pattern laid out by the Minnesota State Medical Association and came up with a perfectly tailored public relations conference, held in Omaha, Neb., June 17 at Hotel Paxton. The meeting was attended by approximately 150 persons. Physicians and representatives of their local radio stations and newspapers were present from all sections of the state of Nebraska. Representatives of the Iowa and Kansas state medical societies were present. Dr. Donald C. Conzett, chairman, sub-committee on publicity, represented the Committee on Medical Service and Public Relations of the Iowa State Medical Society.

The meeting was held for the purpose of making it possible for representatives of radio, press and medicine, to air their views on present public relations problems in the hope that some of the misunderstandings that have existed between these sources could be eliminated. The meeting was called to order at 9:30 a. m. by Dr. J. D. McCarthy, president, Nebraska State Medical Society. Dr. McCarthy opened the session by discussing the reasons for the session and outlined some of the things he hoped would be accomplished during the day. Dr. McCarthy introduced Mr. M. C. Smith, executive secretary, Nebraska State Medical Association, as the first speaker, and his subject was "What Are Our Mutual Interests?". Mr. Smith observed the problem from the viewpoint of a newspaper person, which he was for 14 years prior to becoming associated with the Nebraska State Medical Association, and also as executive secretary of a state medical association. His previous experience in newspaper work made it relatively simple for him to broach the subject from both angles. His conclusions encouraged comment on the subjects discussed.

Other speakers, before the session were Mr. Frederick Ware, managing editor, *Omaha World Herald*, who spoke concerning "On the Spot Medical Coverage"; Mr. Art Gardner, publisher, *The Crete News*, who discussed "The Viewpoint of

the Country Newspaper"; and Mr. Lyle DeMoss, Omaha, program manager, WOW, whose subject was "The Role of Radio." The morning closed with a discussion of "How Can We Best Cooperate?" by Floyd L. Rogers, M.D., Lincoln, chairman, Planning Committee, Nebraska State Medical Association. Dr. Rogers introduced the eight point program of the Nebraska State Medical Association. This program, in brief, concerns the following: (1) public health, (2) a self-discipline committee (a committee elected by the state association to represent self-disciplinary reports which will receive all reports and complaints from individuals), (3) medical economic research (fact-finding group), (4) scientific education, (5) Nebraska medical foundation, (6) Nebraska medical service, (7) fee schedules, (8) public relations. Dr. Rogers' discussion closed the morning program.

A luncheon followed the close of the morning program, after which Mr. James Lawrence, Lincoln, managing editor, *The Lincoln Star*, introduced Mr. Alexis McKinney, Denver, managing editor, *The Denver Post*, who spoke on "Obligations of the Press, Radio and Medical Profession." Mr. McKinney believes the medical profession should establish a spokesman in each county medical society who would be available to answer questions involving matters of general interest to make it possible for the representatives of the press and radio to report to their readers or listeners promptly and accurately. Mr. McKinney lauded the exceptional work of the Colorado State Medical Association and expressed the hope that other state medical associations would benefit by their experience.

The afternoon program was opened for general discussion, and Dr. Harold S. Morgan, Lincoln, chairman of the Public Relations Committee of the Nebraska State Medical Association, presided. The afternoon discussants were Mr. Joe Seacrest, Lincoln, publisher, *The Lincoln Journal*; Mr. Scott Greenwood, Lincoln, secretary, Nebraska Press Association; Mr. Harry Peck, Lincoln, manager radio station KFOR. These men gave their opin-

ions of the papers presented during the day. Their comments varied to some extent, but all agreed that the only obstacle that now stands between better medical, radio and press relations is misunderstanding, which all believed will be eliminated as more of these meetings are held.

The Committee on Medical Service and Public Relations of the Iowa State Medical Society is planning a meeting with the press and radio Sept. 23, 1949, at Hotel Savery, Des Moines. It will be an all day meeting, and representatives of the newspapers and radio stations in all sections of the state will be invited to attend.

Each county society will select a physician from its membership to bring along a representative of

a radio station and a newspaper from his county. An invitation will be sent to all newspapers and radio stations, but the local physician, selected by the county society to attend this meeting, will be only responsible for a personal invitation to one newspaper editor and one radio station representative. The officials of the Iowa State Medical Society are most anxious that this meeting be well attended by the medical profession, the press and the radio. This meeting is of great importance, and all physicians are cordially invited to attend. Registration for the Iowa meeting will begin at 9:30 a. m. Luncheon will be served at noon, and the program will be adjourned at approximately 4:30 p. m.

Donald L. Taylor

BLUE CROSS ANNUAL MEETING

The annual meeting of HSII, the Blue Cross Plan with headquarters in Des Moines, was held April 28 and attended by close to 100 medical and hospital corporate members.

F. P. G. Lattner, executive director, reported that some of the unlimited benefits had risen to astonishing figures, especially drugs, laboratory services and oxygen—risen to a point which might mean limited payments to the hospitals. He pointed out that, as the economic picture tightens up, there may be a tendency to increase the length of stay, from availability rather than from necessity. There are still some bed-patient admissions that look like diagnostic cases.

These problems pose three questions; first, shall we again raise rates? Second, can we, as an inherent service plan, make additional limitations on benefits, or, third, are there other measures to be adopted? The corporate members expressed themselves freely on the inadvisability of raising rates at this time and as being reluctant to curtail any service benefits, particularly in the face of "free medicine" propaganda now circulating.

We are grateful that we are in a health program which is directed, sponsored, and guaranteed by the professions who give the services. These are *our* problems and *we* can find the answer within our own professions.

Suggestions have been made that the hospitals, through the staff organizations, study the use of expensive drugs, not only for Blue Cross but for all patients. These terrifically high bills are apt to turn the payer into an arch advocate of government furnished care. Attention can be directed to the tendency toward longer stays of patients when more beds are available. Precaution taken against extravagant use of expensive drugs and other unlimited benefits can spell the difference between our own plan and one from the outside. Our voluntary, prepayment health plans have taken a promising place in our American way of life. With the continued cooperation of the members of the medical profession and the hospitals we can preserve them.

PRACTICAL NURSE LICENSURE

On July 4 all practical nurses of Iowa became eligible to take examinations for a license through the Iowa Board of Nurse Examiners, Des Moines. The new law was sponsored by the Iowa State Nurses' Association to encourage the establishment of more one year practical nurse schools in Iowa in order to alleviate the present shortage of nursing service. The state now has two such schools—the Mercedian School for Practical Nurses, Marshalltown, and the Hospital for Epileptics and School for Feeble Minded, Woodward.

Sister Mary Brigid, president of the Iowa State Nurses' Association, Iowa City, pointed out that the new law permits anyone meeting the age, citizenship and character requirements to obtain her license without additional training if she has reputably performed the duties and services of a practical nurse for at least two years in the five years immediately preceding the date of application. Such application should be made before July 4, 1951, and be accompanied by affidavits signed by two practicing physicians verifying this experience.

The first examination for the licensure of practical nurses will be September 16 under the auspices of the State Board of Nurse Examiners, State House, Des Moines. The test will include nursing care of the chronic, mildly ill and convalescent patient as well as mother and baby care, knowledge of nursing procedures, body structure and functions, hygiene, and food and home management. The test will be consistent with preparation and limitation of practical nurse activities.

Sister Mary Brigid, founder of the state's first practical nurse school in Marshalltown, emphasized that the law does not interfere with care of sick by domestic or family help but merely sets up legal standards and status for the encouragement of more one year practical nurse schools in order to attract the younger woman into nursing service. "As it is now, the bulk of the state's practical nurse service comes from the older mature woman, often widowed, but her numbers are too few to meet the demand. Iowa needs to train more young women to assist the registered nurse in meeting the increased demand for patient service," Sister added.

SPEAKERS BUREAU

HAROLD MARGULIES, M.D., *Chairman*

JOHN I. MARKER, M.D., Davenport

HORACE M. KORNS, M.D., Dubuque

ROBERT N. LARIMER, M.D., Sioux City

JAMES H. ALLEN, M.D., Iowa City

CHARLOTTE FISK, M.D., Des Moines

FRANK R. PETERSON, M.D., Cedar Rapids

In a recent issue of the JOURNAL the Speakers Bureau outlined briefly its plans for the coming year. Suggestions and evidences of interest were invited. The response was nil. We were not surprised.

A popular myth is the recent concept that the desire to get "something for nothing" is a new defect in the American populace. It isn't new in general, and certainly it isn't new in the medical profession. Nothing points that up more than the efforts to combat socialized medicine, efforts applauded throughout Iowa in a thundering silence. The average doctor is content to sulk about his plight and will even talk vigorously to an already convinced audience of two or three. But he is firmly resistant to all endeavors to gain his active participation in a program to protect his interests. He not only will not offer the various pamphlets to his patients, but he won't even read them himself. Despite the fact that his word has the most influence on medical matters of any individual in the community, he maintains his sullen silence, excepting to bemoan the threat to his freedom. His philosophy resembles closely that of the draftees in the last war: "They can't do this to me!"

Not a lot is said about it, but the demand for socialized medicine is partly stimulated by the physician himself. He wants to feel that his role as a healer makes him sacrosanct, but the voter who pays his bills is not impressed. The people in the United States are irritated at the failure of physicians to show an interest in community affairs, at his abdication of the old position of leader in civic matters, while still cherishing the throne. Physicians often talk about their generous charity work when they are asked to contribute time or money to causes which are not personal. But there are many who confuse charity and unpaid bills; this puts the corner grocer in the same humanitarian bracket.

It won't even do to claim that professional matters are all-demanding. Among these specialized duties are medical meetings and training programs. The Speakers Bureau has had the experience perennially of having to virtually whip a

handful of men into even listening to a skilled lecturer, much less doing something more passive than sitting. It usually requires two or three letters and, frequently, long distance telephone calls to determine whether a given county wants a meeting with all expenses paid and speakers arranged for them, plus a free meal.

No American can live like a cloistered oyster and seriously expect to be safe from interference. These are dynamic times with the world afire in every continent. We have too many fiddlers and too few firemen. Doctors are considered educated men of more than average ability. Their responsibility is to more than themselves, and they should remain vigilant in all matters of social significance. The bare minimum is that they help those who would help them. This defect on the part of American doctors everywhere has helped bring the entire profession to the lowest level of general respect in its history. It will require redoubled efforts to overcome the harm that has been done. This applies not only to the present critical period in which our whole system is threatened; we must also elevate professional standards to the highest possible level. The Speakers Bureau solicits your cooperation with all groups working toward such an achievement.

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Tuesdays at 11:45 a.m.

WOI—Thursdays at 11:15 a.m.

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|---------------------|--|
| Aug. 2-4 | Preparing Your Child for School
Benjamin C. Hamilton, Jr., M.D.,
Jefferson |
| Aug. 9-11 | Why the Two Year Old Doesn't
Eat
Charles Burr, M.D., Des Moines |
| Aug. 16-18 | Congenital Heart Disease
George Montgomery, M.D., Ames |
| Aug. 23-25 | Functions of the School Nurse
Iowa State Nurses Association |
| Aug. 30-
Sept. 1 | Peptic Ulcer—Causes, Symptoms,
Complications
Gordon Best, M.D., Council Bluffs |

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

CARDIOVASCULAR DISEASE: Fundamentals, Differential Diagnosis, Prognosis and Treatment—By Louis H. Sigler, M.D., F.A.C.P., Attending Cardiologist and Chief of Cardiac Clinic, Coney Island Hospital; Consulting Cardiologist, Rockaway Beach Hospital; Consulting Cardiologist, Menorah Home and Hospital for the Aged. New York, Grune & Stratton, 1949. Price \$10.00.

MANUAL OF MEDICAL EMERGENCIES—By Stuart C. Cullen, M.D., Professor of Surgery, and Chairman, Division of Anesthesiology, State University of Iowa College of Medicine; and E. G. Gross, M.D., Professor and Head of Department of Pharmacology, State University of Iowa College of Medicine. Chicago, The Year Book Publishers, Inc., 1949. Price \$3.75.

MEDICAL ETYMOLOGY: The History and Derivation of Medical Terms for Students of Medicine, Dentistry and Nursing—By O. H. Perry Pepper, M.D., Professor of Medicine, University of Pennsylvania. Philadelphia & London, W. B. Saunders Co., 1949. Price \$5.50.

NEW AND NONOFFICIAL REMEDIES 1949: Containing Description of the Articles Which Stand Accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1949—Issued under the Direction and Supervision of the Council on Pharmacy and Chemistry of the American Medical Association. Philadelphia, J. B. Lippincott & Co., May 1949.

PSYCHOSEXUAL DEVELOPMENT IN HEALTH AND DISEASE: The Proceedings of the Thirty-Eighth Annual Meeting of the American Psychopathological Association, Held in New York City, June 1948—Edited by Paul H. Hoch,

M.D., New York State Psychiatric Institute; Columbia University, College of Physicians and Surgeons, New York City; and JOSEPH ZUBIN, Ph.D., New York State Psychiatric Institute; Department of Psychology, Columbia University, New York City. New York, Grune & Stratton, Inc., 1949. Price \$5.50.

RAPID MICROCHEMICAL METHODS FOR BLOOD AND CSF EXAMINATIONS—By F. Rappaport, Ph.D., Laboratory Director of the Biochemical and Serological Department of the Beilinson Hospital, Petach Tikva, and Laboratory Director of the Bacteriological and Serological Department of the Hadassah Municipality Hospital, Tel-Aviv, Israel. With a Foreword by F. SILBERSTEIN, M.D. New York, Grune & Stratton, Inc., 1949. Price \$8.75.

REGIONAL ILEITIS—By Burrill B. Crohn, M.D., Consulting Gastroenterologist, Mount Sinai Hospital, New York. New York, Grune & Stratton, 1949. Price \$5.50.

REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1948: With the Comments That Have Appeared in the Journal. Chicago, American Medical Association, 1949.

ROENTGEN DIAGNOSIS OF THE EXTREMITIES AND SPINE—By Albert B. Ferguson, M.D., Associate Professor, Orthopaedic and Fracture Surgery, Boston University; Consulting Roentgenologist, Children's and Memorial Hospitals, Boston. Formerly Director of Roentgenology, New York Orthopaedic Hospital. Second Edition, Revised and Enlarged. New York, Paul B. Hoeber, Inc., 1949. Price \$15.00. *Annals of Roentgenology*, vol. xvii.

BOOK REVIEWS

HANDBOOK OF DISEASES OF THE SKIN

By Richard L. Sutton, M.D., Emeritus Professor of Dermatology and Syphilology, University of Kansas Medical School; and RICHARD L. SUTTON, JR., M.D., Associate Professor of Dermatology and Syphilology, University of Kansas Medical School. St. Louis, The C. V. Mosby Co., 1949. Price \$12.50.

The Suttons' *Handbook of Diseases of the Skin* is as timely as a current journal. There is a tremendous amount of new material in it. Unlike many other texts, most of the outmoded and outcast information is deleted and not dragged along again. In the subspecialties of dermatology the authors have quoted freely from the experts in these fields. The arrangement of the contents of the volume, according to etiology, gives a clearer and firmer perspective of the dermatologic field. The preliminary chapters on anatomy, embryology and physiology are well done, and the illustrations are excellent. There is a fine dissertation on the treatment of contact dermatitis. These features affected me positively, and these are the ones most likely to appeal to students and practitioners.

There are some aspects, however, which impressed me adversely. The use of very fine print annoys the reader. If items are important enough to be incorporated and read, they should be printed in type large enough to be read with comfort.

The writer of a text should be cautious to avoid peremptory criticism. The importance of psychiatry in dermatology is becoming increasingly apparent. Any specialist should be humble in the face of so much about which he is still ignorant. The psychiatric components of some skin diseases are slowly reaching our ken, so we are understanding these diseases better. Therefore, injudicious remarks concerning the relationship of the specialty to dermatology should not be made.

In a field where therapy is in such a fluid state, as in syphilis, the advice given regarding it should be carefully stated on the basis of results in a substantial series of cases, so far as that is possible; this advice should not be tossed off in an arbitrary manner, as is done here.

The references for a point in discussion are given when the point is made. That is good. Too often, however, an article is indicated to be of great value on a given subject, but the contents of the article are not summarized. In a textbook, the substance of merit in an article should be incorporated into it. The statement advising the reader to read the article instead is a frustrating experience. Often, physicians use these texts because libraries and other references are not available.

Repeatedly throughout the book, there are statements with a satirical tone. This may be the style of the author, but a textbook is hardly the medium for that type of style.

The Suttons' recommendations for x-ray therapy are generally sound. However, for many conditions they recommend dosages which seems excessive to me.

These adverse criticisms do not detract from the eminent value of the book. To repeat, for a textbook it is full of new material, is as timely as a current journal.

S. G.

MAYO CLINIC DIET MANUAL

By the Committee on Dietetics of the Mayo Clinic. Philadelphia & London, W. B. Saunders Co., 1949. Price \$4.00.

For the hospital or institution that is elaborately equipped with devices for weighing or measuring food, and at the same time is well staffed with dietitians, here is a manual that contains a complete series of diets for any occasion or requirement. Detailed outlines and sample menus are presented for any stage of ulcer therapy, for all conceivable lesions of the gastro-intestinal tract, general or specifically intestinal surgery, all the metabolic diseases, the anemias, and for the management of allergy. The manual achieves precision and exhaustive detail at the expense of brevity; the differences in many of the gastro-intestinal diets are too minor to warrant their classification as separate and distinct offerings for practical use. Nevertheless, if perfection in diet therapy is demanded, the basis for such can be found in this book. The appendix contains complete tables, listing the composition of food for use in the calculation of menus.

A. G. L.

OBSTETRIC ANALGESIA AND ANESTHESIA;

Their Effects Upon Labor and the Child

By Franklin F. Snyder, M.D., Associate Professor of Obstetrics and Associate Professor of Anatomy, Harvard Medical School. Philadelphia and London, W. B. Saunders Co., 1949. Price \$6.50.

The author gives a complete and detailed study of the various analgesic drugs used for relief of pain during labor and the anesthetics employed during delivery. The effects of both on the mother and fetus are explained, with the physiology of labor, and the effects of analgesic drugs upon the mechanism of labor, being measured, and the effects upon the fetus described.

The causes of fetal mortality in relation to time of gestation are presented in detail, and a discussion of the various types of asphyxia, intra-uterine pneumonia, respiratory trauma and atelectasis is included.

Extensive research concerning the presence of intra-uterine respiration is discussed, and the incidence of fetal asphyxia with relation to the etiologic factors, including various analgesic and anesthetic

agents, is brought out. Fetal anoxemia and its relation to the respiration and heart action is illustrated.

This is a worthwhile book for anyone specifically interested in obstetric analgesia and anesthesia and their effects upon the mother and fetus.

H. L. K.

CLINICAL CASE-TAKING

By George R. Herrmann, M.D., Ph.D., Professor of Medicine, University of Texas. Fourth Edition. St. Louis, The C. V. Mosby Co., 1949. Price \$3.50.

Clinical Case-Taking is intended as a comprehensive guide for the study of a patient. It is to be used at the bedside by a sophomore medical student to assist him in assembling all pertinent information about a patient. It would seem to satisfy this intention but is of little value for the clinician, except as a brief review in the technic of eliciting a history.

The appendix, which delves into some common symptoms, is of value to anyone investing the 30 minutes necessary to read it.

W. J. I.

THE 1948 YEAR BOOK OF GENERAL MEDICINE

Edited by Paul B. Beeson, M.D.; J. Burns Amberson, M.D.; George R. Minot, M.D., S.D., F.R.C.P. (Edinburgh and London); William B. Castle, M.D., S.M., M.D. (Hon.) Utrecht; Tinsley R. Harrison, M.D.; and George B. Eusterman, M.D. Chicago, The Year Book Publishers, Inc., 1948. Price \$4.50.

The 1948 Year Book of General Medicine presents a wide coverage of recent advances in the fields of infectious diseases, diseases of the chest, of the blood and blood-forming organs, of the heart and blood vessels, and of the digestive system, with brief sections on diseases of the kidney and on metabolism and nutrition.

Essentially a well arranged and subdivided collection of condensed articles from recent publications, it draws freely from the foreign as well as the North American literature. There is evidence of care in the selection of the material for condensation, and as a result recent trends are accurately reflected. The inclusion of sections on normal and abnormal physiology, with reference to chest and cardiovascular disease, is a manifestation of the emphasis placed upon the basic sciences by the profession today.

It would be impossible for the average busy practitioner to profit from such a large number of important recent contributions to the medical literature without the help in selection, organization and condensation, offered by a book such as this.

J. P.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. ROGER M. MINKEL, Fort Dodge

President-elect—MRS. CLAIRE H. MITCHELL, Indianola

Secretary—MRS. IVAN K. SAYRE, St. Charles

Treasurer—MRS. WILLIAM B. CHASE, JR., Des Moines

Corresponding Secretary—MRS. CHARLES H. COUGHLAN, Fort Dodge

LINES FROM THE PRESIDENT

We have been alerted for action. An appeal has been made for our support by the medical profession. A program has been charted for us. It is time for us to consider how well we are doing our share, how well we are cooperating with the projects of the Auxiliary. The fall work is ready to begin.

A complete list of doctor's wives has been compiled indicating those who are members of the Auxiliary; maps have been prepared showing organized counties and locations of members-at-large.

County presidents and members-at-large have been asked to report on activities concerning legislation and public relations as to:

1. Requesting persons to write to congressmen and committees regarding health legislation.
2. Listing number of talks presented in counties regarding present legislation and by whom given.
3. A summary of amount of material distributed and how it was distributed.

We are now ready to enter into the fall program for the Auxiliary, and we must continue our support as informed members regarding legislation to distribute material. Posters, pamphlets and other materials are available upon request from Auxiliary headquarters. In order to develop good public relations in our communities and work toward better health for all, we must give support to the Nurse's Loan Fund, Student Nurse Recruitment, and aid in the work for the handicapped.

The above is your check list. What have *you* done as a member of the Woman's Auxiliary to the Iowa State Medical Society? May we all give just a little more time and effort to the programs charted for us. Individual effort multiplied by the membership will certainly show worthwhile gain for our woman's group. Let us accept the challenge and evidence work well done.

Mrs. R. M. Minkel, President

HIGHLIGHTS FROM THE CONVENTION OF THE WOMAN'S AUXILIARY TO THE AMA

The Woman's Auxiliary to the Iowa State Medical Society was represented at the annual convention of the American Medical Association, in Atlantic City June 6 to June 10, by the following members, who concentrated on meetings having to do with their particular committees: Mrs. J. D. Hen-

nessey, Council Bluffs, councilor (Legislation); Mrs. A. B. Phillips, Des Moines (Public Relations); Mrs. M. D. Beddoes, Oelwein, second vice president (Program); Mrs. A. G. Felter, Van Meter, councilor (Tuesday sessions); Mrs. Robert Mason, Des Moines (Legislation); Mrs. Robert Hoffman, Des Moines (*Hygeia*); and Mrs. C. J. Lohmann, Burlington (General sessions).

Mrs. J. D. Hennessey reported that Iowa has only 54 subscribers to "*The Bulletin*." We need more subscribers if we are to be well informed Auxiliary members on both state and national levels. Mrs. Hennessey enjoyed seeing Whitaker and Baxter, and their secretary, Mary McGinn. They stressed the importance of having the poster "The Doctor" displayed in every office. "A.M.A.'s Secret Document," which was sent to all senators, representatives, governors, universities, etc., contains the four point plan with which the Woman's Auxiliary is expected to help:

1. The endorsement drive,
2. Women in state speakers bureaus,
3. Pamphlet distribution,
4. Urging the press to publish Whitaker and Baxter material.

Mrs. A. B. Phillips attended public relations meetings. She reports the four points stressed by Mr. Rember which are of interest to Auxiliary members:

1. State medical societies will provide leadership.
2. Keep alive interest in public health projects, particularly those which involve long range planning.
3. Do not just talk against compulsory health insurance; do some constructive work in educating the public concerning existent voluntary insurance plans.
4. Keep people writing to their congressmen.

AUXILIARY BOOTH AT STATE FAIR

There will be a booth at the Iowa State Fair where pamphlets will be distributed. The Public Relations Committee, whose co-chairmen are Mrs. A. B. Phillips and Mrs. L. K. Shepherd, will be in charge of the project. Volunteers will be needed to man the booth. Please contact Mrs. Phillips (5821 Woodland Ave., Des Moines) or Mrs. Shepherd (1723 Forty-eighth St., Des Moines).

RECOMMENDED AUXILIARY READING

"Keep Politics Out of This Picture," WBP-2.

"Compulsory Health Insurance," WB-14.

"50 Questions; Voluntary Way is the American Way," WBP-1.

By-Laws of the Woman's Auxiliary to the Iowa State Medical Society.

"Questions and Answers About the Woman's Auxiliary."

All of the above are available from Auxiliary Headquarters, 629 Eleventh Ave., North, Fort Dodge. Copies of the recommended revised form for county by-laws are also available.

AUXILIARY ATTENDANCE AT PUBLIC HEALTH MEETINGS

Mrs. Howard Smith, Woodward, first vice president, represented the Auxiliary at the regional meeting of the National Health Council, in Omaha April 25 and 26. Mrs. A. B. Phillips, public relations chairman, also attended. Mrs. Smith is now a member of the Executive Council of the Iowa Public Health Planning Committee.

Mrs. C. C. Jones attended the Iowa Public Health Planning Committee meeting held in Des Moines June 17.

ACTIVITIES OF COUNTY AUXILIARIES

The Upper Des Moines Valley Medical Auxiliary was dissolved the past year, and in March the Emmet County Medical Auxiliary was organized. Meetings are held the first Thursday of each month. Each member of the group has charge of a program for the ensuing year. At the April meeting the Wagner-Murray-Dingell Bill was reviewed. The May and June topics were "Benefits of Hospitalization" and "The Financial Side of Poliomyelitis." Contributions were made to the Nurses Loan Fund, the Crippled Children's Fund, and the Cancer Drive. Meetings will be resumed in the fall.

Mrs. E. K. Vaubel, Secretary

The following women are officers of the newly organized Des Moines County Auxiliary: Mrs. G. B. Crow, president; Mrs. C. J. Lohmann, vice president; Mrs. R. D. Rowley, secretary-treasurer.

ANNUAL COMMITTEE REPORTS 1948-49**Archives Committee**

The Archives Committee is a new one, having been in existence only two years.

As most of you know, 13 loose leaf notebooks were purchased last year and distributed at the annual meeting in April to the president, president-elect, and such of the committee chairmen most in need of them. Our plan was that each chairman would make a permanent record of the work done by her committee and also file in her book all correspondence and material which would be of help to her successor.

I think that you were all agreed that we were much in need of such records, and I hope that you

have brought these books with records completed and also containing copies of the reports given at board and annual meetings.

Mrs. Arthur E. Merkel, Chairman

Publications Committee

The chairman attended all board meetings and the health section of the Iowa Community Development Workshop in Des Moines in October 1948. She has completed two years' service as public health chairman for the Iowa Federation of Women's Clubs. For the seventh year she has edited the "Women's Auxiliary News" every month, stressing county news, every phase of the state program, and using material from *Hygeia* and *The Bulletin*. It is heartening to note an improved response in reports from county auxiliaries. It is also good to know that our average paging in the Journal has doubled itself. Our average is four pages, although we had six pages in the March 1949 issue.

The chairman has done much supplementary writing in the various departments of Auxiliary work, as well as occasional book reviews on topics of medical interest and condensation of considerable legislative material having to do with medicine. At the request of the state president, she prepared an article "The Taxpayer and National Health Bill S-5," which was recommended for publication through the impetus of Auxiliary members in as many newspapers as possible throughout the state.

Recommendations:

1. That the Auxiliary bind the existing copies of the "Woman's Auxiliary News."
2. That all material intended for publication be in the hands of the chairman not later than the twelfth of each month.
3. That all material submitted for publication be typewritten and double-spaced.
4. That all members be urged to read the "Woman's Auxiliary News." Keeping informed on county, state, and national activities is a modest contribution to the profession which provides our living.

Mrs. Keith M. Chapler, Chairman

Revisions Committee

In June the president requested the chairman to make arrangements to have the Revised By-Laws printed. With the assistance of Mrs. McPherrin, a printer was contacted, and after due consultation with the president 1,000 copies were ordered at a cost of \$43.92.

These bound copies were distributed to the board members at the fall board meeting. It was voted to give the county presidents sufficient copies for their members and to leave the remaining copies at the central office.

Also, at the request of the president, copies of model by-laws for county Auxiliaries were sent to her to give to counties just organizing.

There being no request for revisions, the other members of the committee were not contacted.

Mrs. Elbert T. Warren, Chairman

ANNUAL COUNTY MEDICAL AUXILIARY

REPORTS 1948-49

Buchanan County

First Meeting—April 14, 1948: Dinner and meeting to obtain permission from doctors to organize Auxiliary was held with eight wives present. Permission was granted and plans were made to invite Mrs. Roger Minkel to help organize at the next meeting.

Second Meeting—June 8, 1948: Joint dinner was held with doctors, with separate meetings. Dr. and Mrs. Roger Minkel were guests. Mrs. Minkel helped us organize.

Third Meeting—Feb. 24, 1949: This was our first official meeting. All dues were paid, and the Auxiliary voted to have our official year begin January 1 and to have quarterly meetings. We received three more members. By-Laws were drawn up, and officers elected: Mrs. R. L. Knipfer, Jesup, president; Mrs. J. F. Loeck, Independence, secretary-treasurer.

Number of doctors' wives eligible for membership 13

Number of members 12

Auxiliary Work 1948—Nurse Recruitment: At Jesup and Independence the movies on nursing were shown to all high school girls. Literature was given out and talks by young registered nurses made. This was also done at the Jesup P. T. A. Literature was given out in Hazelton.

Iowa Cancer Society: An active working part was taken by six doctors' wives in the county.

Auxiliary Work 1949—Socialized Medicine: Delegate Mrs. Knipfer was sent to convention of Academy of General Practice to find out what is being done and what is expected of us. Contacted all superintendents of schools (11) requesting their cooperation by distributing literature to all high school students to be taken home to their parents, so they may become more informed on socialized medicine. To date, March 31, seven schools have agreed and already have the material. Also, spoke about this at Jesup P.T.A. Notice of this was put in the newspaper.

Program: At our next meeting we are to have reports on socialized medicine: one, the government's program, the other, the doctors' voluntary program.

Social: The mere fact that we have been able to get together with our husbands for dinner has already led to better understanding and friendship in the county.

Press: We have been unable, as yet, to induce a county newspaper to print "The Taxpayer and National Health Bill, S-5." After offering to put it in as a paid advertisement, the *Jesup Herald* is now considering it.

Relationship to Medical Profession: A general willingness for us to organize was shown, but the older doctors are skeptical as to its worth. The phase of work in which they are most interested and cooperative is socialized medicine.

Mrs. Robert L. Knipfer, President

Dubuque County

There are in Dubuque County 67 doctors' wives, including widows, who are eligible for membership in this organization. Last year there were 15 paid members. For the year 1948-1949 there were 29 members and eight who paid back dues for the preceding year.

In the past few years meetings were held only two or three times during the year, but in 1948-1949 monthly meetings were held, with average attendance about 25 members. The meeting is always on the second Tuesday of the month, the same day as the meeting of the Dubuque County Medical Society. At the opening of the year, we appointed two hostesses for each monthly meeting, these women to plan and arrange the program of that one meeting. We have found that this has been most effective in creating good lively interest among our members. We met sometimes for afternoon meetings, preceded by luncheons; sometimes we had evening meetings, preceded by dinners. At two of the meetings we had guest speakers, both relevant to our work on the new project which we have undertaken this year, work for the Iowa Society for Crippled Children and Adults. We are planning an October sale of materials made by these handicapped people and are hoping for a great success. During the past month we aided the Easter Seal campaign in Dubuque by placing the canisters for the drive in different public places.

We are continuing to circulate *Hygeia* and had a successful past year, but were disappointed in the result of our drive to get Dubuque dentists interested in the magazine.

Most of our members are contributing to the state Student Nurse Fund.

Members of the Dubuque County Medical Society voted at their last meeting to pay the Auxiliary dues of the wives on January 1, when the Medical Society dues are payable, both dues to be paid to the treasurer of the Medical Society. That treasurer will then turn dues to our Auxiliary over to our treasurer. We intend to change our fiscal year to coincide with that of the Medical Society and expect to have a greatly increased membership next year as the result of this method of dues collection.

Mrs. Albert J. Entringer, President

Wapello County

We have 39 members eligible for membership. A year ago we had 37 members, a gain of two.

Discussion meetings are held each month from October to May, with a June picnic for members and husbands. Average attendance is 14.

Program Work: Each meeting a paper is given on subjects pertaining to medicine, etc. Mrs. Felter attended a meeting at which Ewing's report was presented; our two state representatives were also present. At a dinner last November, when we entertained our husbands, two out of town speakers (one, Mr. D. L. Taylor, Des Moines) talked on Blue Cross and Blue Shield. Also, our local assessor presented

an interesting talk on taxes. We have had a rotating system of literature pertaining to socialized medicine, which has been fairly successful.

Public Relations: At the present writing little has been accomplished in this way. The most important is to enlighten the public on present legislative measures, and our main accomplishment for the past year has been to enlighten ourselves. However, there have been some papers on socialized medicine given at P.E.O. meetings.

Legislation: We had one meeting devoted to proposed and pending legislation and are all reading all available material so pertaining.

Hygeia: This project got off to a late start, but we have a good chairman and will no doubt have better results this coming year. At the present time 24 doctors take *Hygeia*, 11 dentists, 2 schools, 1 hospital, 1 library. The credit for this year is 7. Personal contact is being made by Mrs. Sellman, our chairman.

State Objectives: The following committee has been appointed to the nurse recruitment project: Mrs. E. B. Hoeven, Mrs. D. G. Emanuel and Mrs. E. G. Barton. They have contacted the Sister in charge of nurses training at St. Joseph's hospital, have had talks given before graduating classes, and have secured publicity through local paper to interest girls in neighboring towns. We are sponsoring a girl in training or are going to do so this year. Have raised \$173.50 toward the fund. At the present time we have interested five or six girls in enrolling and have more lined up for this fall. The cancer and handicapped persons projects are handled by other groups in town.

Projects: Nurse-recruiting and informing ourselves on socialized medicine and what we can do about it.

Social Activities: We have a picnic each June for husbands as a closing meeting. Attendance is around 45 to 50. Just before Thanksgiving we had a dinner at the Nurses Home at St. Joseph's Hospital, where we entertained our husbands and at the same time charged them \$5 a couple, thereby establishing a fund for our nurse-recruiting program and the girl we are to sponsor. We feel it is good public relations to have one or two social events during the year.

Press and Publicity: Our meetings and parties are always reported to the press, as well as any out of town speakers and guests we may have. Most of the members read the state news fairly well. At present we do not have the *National Bulletin*, but will bring the matter up for discussion and suggest perhaps one subscription to be reported on at meetings.

Relationship to Medical Profession: They are anxious to have us informed on the subject of socialized medicine in order that we can help along in many ways with public relations. They are also glad to have us working on nurse-recruiting, as they know how short we are of nurses and the great need for more.

Mrs. E. B. Howell, President

Webster County

We have in Webster County 41 doctors' wives who are eligible for membership. Last year we had 36 members, this year 38 paid members, a gain of two. We have held five meetings during the past year, with an average attendance of 20. Our meetings are social in nature.

We have had no educational programs this year. However, we always discuss the legislation that is coming up and the best way for doctors' wives to conduct themselves in regard to serving on committees, etc. We have had much conversation concerning the Basic Science Law and have contacted our legislators in regard to same both by letter and by seeing them personally.

We have promoted programs in P.T.A. groups and over P.T.A. radio programs. There are about 20 in our Auxiliary who are active in other women's organizations. We have cooperated in the Summer Round-Up program and in Mental Hygiene programs. In our county we could use more school nurses. We should have more education in regard to socialized medicine. We have studied the legislation in regard to the Basic Science Law and also the Federal Health Program.

Mrs. J. J. Vincent has been our *Hygeia* chairman and she has sold eight subscriptions. Her husband gave as a gift a subscription to *Hygeia* to Lincoln School and also to a beauty parlor in the Carver building.

We have worked on the nurses survey, and also on the Nurses Loan Fund and Nurse Recruitment. We have contributed to the Nurses Loan Fund. Our big project of the year was a Nurses Tea given on Oct. 15, 1948, for the state nurses convention, at which time we entertained about 300 nurses. We have two members on the Community Council for Social Planning.

Our meetings are luncheons or dinners and are conducted on social lines. We get to know each other. All our meetings have been reported in the paper and over the radio. Mrs. Charles Baker is our publicity chairman.

The relationship with the medical profession is excellent.

Mrs. Emerson B. Dawson, President

Your cooperation in strictly adhering to the following rules would be greatly appreciated by the editorial department of the Journal, and would enable us to render you better service on "Woman's Auxiliary News."

1. Material intended for publication should be received by your chairman by the twelfth of each month, as copy must be in the Journal office by the fifteenth in order to meet publication deadlines.

2. All material should be typewritten and double-spaced on standard 8½x11 paper; considerable editing is usually necessary, and it is very difficult for the printers if this is done on single-spaced copy.

SOCIETY PROCEEDINGS

MEETINGS

Buchanan County

The Buchanan County Medical Society met June 30 at the Wapsipinicon Golf and Country Club for golf, dinner, and a scientific lecture on kidney tumors presented by Dr. Nathaniel G. Alcock, president of the State Society.

Linn County

The Linn County Medical Society will meet September 8. Dr. Harwell Wilson, professor of surgery, University of Tennessee, Memphis, will speak on the subject, "The Diagnosis and Treatment of Thrombo-Embolic Peripheral Vascular Disease."

Pottawattamie County

The Pottawattamie County Medical Society held a dinner and business meeting on June 21 at the Hotel Chieftain. Dr. Gerald V. Caughlan, who was a delegate to the recent A.M.A. convention in Atlantic City, N. J., touched on some of its highlights.

Wapello County

Newly elected officers of the Wapello County Medical Society are Frederick L. Nelson, Jr., president; Arthur L. Blome, vice president; Edward B. Hoeven, secretary-treasurer; Clyde A. Henry, delegate; Ralph J. Selman, alternate delegate. On the board of censors are Drs. Robert O. Hughes, Siegmund F. Singer, and William N. Whitehouse. The public relations and economics committee consists of Drs. Vernon S. Downs, Frederick E. Nelson, Sr., and Robert O. Hughes. Drs. Hoeven, Downs, and Harold A. Spilman compose the blood bank committee. Regular meetings will begin in September.

Washington County

At the Washington County Medical Society meeting June 23, Dr. Robert L. Jackson, of the SUI College of Medicine, gave an illustrated lecture on "Diabetes in Children."

Webster County

At a meeting June 17, the Webster County Medical Society was addressed by Dr. Carl Rusche, of Los Angeles, Calif., president of the American Urological Society. The dinner meeting was held at the Hotel Warden in Fort Dodge.

Woodbury County

The Woodbury County Medical Society held a dinner meeting June 23 at the Mayfair Hotel. Dr. Murray Franklin, associate professor of clinical research at the SUI College of Medicine, gave an illustrated lecture on diseases of the liver.

PERSONALS

Dr. John Ackerman, of Milwaukee, Wisc., has become associated with Dr. Werner P. Pelz in Nashua. Dr. Ackerman is a graduate of the Marquette University School of Medicine, Milwaukee, Wisc.

Dr. Robert B. Allen, who for the past year has been associated with Dr. Frank Ober in Burlington, has opened an office for general practice in Mediapolis.

Dr. Frank J. Anderson, of Rolfe, has sold his practice to Dr. E. O. Loxterkamp, of Elgin, Ill. Dr. Anderson's future plans have not been announced.

Dr. D. K. Bengé, who since his internship has been general resident physician at Broadlawns Hospital, Des Moines, has become associated with Dr. George E. Schnug in Dows. Dr. Bengé is a graduate of the SUI College of Medicine.

Dr. J. W. Crossley has opened offices in Iowa Falls, specializing in eye, ear, nose and throat. Dr. Crossley was graduated from SUI College of Medicine in 1946, and since that time has served in the army medical corps, being stationed at Fort Sheridan, Ill., for the past two years.

Dr. Mildred Doster, for two years director of the Washington County Health Unit, has resigned her position and left for Denver, Colo., where she will be engaged in public health work in the Denver schools.

Dr. Lloyd J. Gugle has opened offices in Ottumwa for the practice of internal medicine. A native of Iowa City, Dr. Gugle was graduated from the SUI College of Medicine in 1942 and served his internship at City Hospital, Cleveland, Ohio. For three years he served with the army medical corps, and for the past three years has been taking postgraduate training in internal medicine at Hermann Hospital and Baylor University College of Medicine, Dallas, Texas.

Dr. Robert E. Hawkins, a native of Council Bluffs, has joined the staff of the Cogley Clinic there, to head a new department of otolaryngology. Dr. Hawkins was graduated from Creighton University School of Medicine, Omaha, Neb., and interned at the U. S. Naval Hospital in Oakland, Calif. Following his service with the navy medical corps, he took post-

graduate work at the University of Wisconsin, Madison, specializing in ear, nose and throat.

Dr. Martin Hicklin, of Wapello, has been named full time director of the Des Moines County Health Center. Dr. Hicklin received his medical education at the SUI College of Medicine and Rochester, N. Y., and recently was graduated from the University of Minnesota Public Health School.

Dr. Donald C. Koser, of Cherokee, spoke to his local Kiwanis club on July 5 on the subject of current national medical legislation.

Dr. Robert N. Larimer, of Sioux City, presented a health talk in Galva on June 28 at Legion Hall.

Dr. John R. Lucas, formerly of Columbus, Ohio, has joined the staff of Central Clinic in Davenport. Dr. Lucas was graduated from the Western Reserve University School of Medicine, Cleveland, Ohio, and served his internship at St. Francis Hospital, Columbus. He has had four years of approved residency in general and orthopedic surgery. During World War II, Dr. Lucas served for three years with the army air force medical corps.

Dr. G. W. Marme has become associated with Dr. Leander H. Schafer in DeWitt. A graduate of Loyola University Medical School, Chicago, Dr. Marme served three years in the army medical corps. He comes from St. Paul, Minn., where he was a resident physician in a hospital there.

Dr. Frederick E. Marsh, Jr., having completed his internship at Grace Hospital, Detroit, Mich., has entered the general practice of medicine with his father, Dr. Frederick E. Marsh, at the Council Bluffs Clinic. Dr. Marsh, Jr., was graduated from the University of Nebraska School of Medicine in 1948.

Dr. John P. McCann, who has been practicing in Marshalltown for three years, has accepted a temporary appointment as a resident physician in the urology department at the University Hospital, Iowa City.

Dr. Ashton McCrary has joined the staff of the McCrary-Rost Hospital in Lake City, his home city. Dr. McCrary was graduated from Northwestern University Medical School, Chicago, and, following a year's internship at Gorgas Memorial Hospital in the Panama Canal Zone, was appointed to a one year residency in internal medicine there.

Dr. Albert Mueller, who has been practicing medicine for the last eight years at Rosiclare, Ill., has opened offices in Monona. Dr. Mueller was graduated from the Northwestern University School of Medicine, Chicago, and served his internship at Englewood Hospital there.

Dr. James H. O'Donoghue, of Storm Lake, was highly honored on Father's Day, when his son, Dr. Arch F. O'Donoghue, of Sioux City, announced that he is presenting an observatory and telescope to Morningside College as a memorial to his father. The 12 inch reflecting telescope will be the largest in Iowa. Construction is scheduled to begin next spring.

Dr. Herbert W. Rathe, of Waverly, has been appointed to the Iowa State Board of Health to replace Dr. Edward M. Myers, of Boone, who has served as president of the Board and been a member for over 14 years.

Dr. Rudolph A. Selo, who has practiced in Independence since November 1939, has moved to Mission, Kan., where he will attend the State University of Kansas, taking a two year course in anesthesia.

Dr. W. W. Southwick has opened a practice for general medicine in Marshalltown. A native of Marshalltown, Dr. Southwick was graduated from Hahnemann Medical College and Hospital of Philadelphia, in 1946. He served at St. Mary's Hospital, Minneapolis, Minn., and the Minneapolis General Hospital, and recently completed 18 months with the army medical corps.

Dr. William M. Spear, medical director of the State Sanatorium at Oakdale, was elected Iowa governor of the American College of Chest Physicians at the fifteenth annual meeting held in Atlantic City, N. J., on June 2 to 5. Dr. Spear's term will extend for a period of three years.

Dr. Arthur Steindler, professor and retired head of the department of orthopedics in SUI's College of Medicine, has moved his offices from the Children's Hospital to Mercy Hospital.

Dr. Emil M. Stimac, of Princeton, has been appointed head of the medical division at the Rock Island Arsenal. A native of Virginia, Minn., and a graduate of the University of Minnesota College of Medicine, Dr. Stimac served for two years in the army medical corps during the war. He has been practicing for the past year in the LeClaire-Princeton area.

Dr. V. W. Swayze has become associated with Drs. W. W. Daut and E. H. Carlson in Muscatine. A graduate of the College of Medical Evangelists, Los Angeles, Calif., Dr. Swayze interned at the Los Angeles County General Hospital. He spent two years in the army medical corps and has recently completed a surgical residency at the Presbyterian Hospital, Denver, Colo.

Dr. John R. Walker, an orthopedic specialist, has become associated with Drs. J. R. Thompson, E. L. Rolfe, and W. C. Drier, in Waterloo. Dr. Walker was graduated in 1943 from the SUI College of Medicine and served his internship at City Hospital, Miami, Fla., where he took a year's additional training in fractures. Following a year's service with the navy medical corps, Dr. Walker was associated with the department of orthopedics under Dr. Steindler in University Hospitals, Iowa City.

Three additions to the staff of the Cherokee State Hospital have been announced. Dr. Charles O'Brien will be a senior physician in psychiatry, coming here from the Bangor State Hospital, Bangor, Maine. A 1923 graduate of Georgetown Medical School, Washington, D. C., Dr. O'Brien took postgraduate training at Harvard Medical School, Boston, Mass., and was an instructor in Yonkers, N. Y. He practiced in New York City for 11 years before becoming senior physician, and later department superintendent, of Gold-Water Memorial Hospital, Welfare Island, N. Y.

Also as a senior physician in psychiatry, Dr. Max Serog comes to Iowa from the New Hampshire State Hospital, in Concord, N. H. Dr. Serog, a former professor of psychiatry at the University of Breslau, Germany, is in charge of the male admission service of the hospital.

Dr. William E. Youland, of New York, N. Y., has joined the staff as a pathologist.

Five members of the SUI medical faculty have been appointed as an executive committee to perform the duties of dean for the College of Medicine. They are as follows: Dr. Robert T. Tidrick, associate professor of surgery, chairman; Dr. E. D. Warner, professor and head of pathology; Dr. W. R. Ingram, professor and head of anatomy; Dr. Willis M. Fowler, professor of internal medicine; and Dr. Wilbur R. Miller, professor and head of psychiatry.

Six doctors have recently been appointed to the SUI College of Medicine faculty. Dr. Woodrow Morris, new assistant dean of student affairs of the medical college, had his doctorate in clinical psychology and was formerly chief psychologist of the Psychopathic Hospital.

Two doctors joining the hospitals as assistant professors in radiology are Dr. Eugene F. Van Epps, who is a graduate of SUI College of Medicine and who had a private pediatrics practice in Clinton, and Dr. Stephen A. Forbes, a graduate of Rush Medical College, Chicago, who joined the SUI staff in 1947.

Dr. George E. Perret, who will join the staff August 15 as an assistant professor of surgery, has his medical degree from the University of Berlin and was a research assistant at the Kaiser Wilhelm Institute before coming to the United States to study surgery at the Mayo Clinic in Rochester.

Dr. Howard Krouse, an assistant professor of psychiatry, had his medical training at SUI College of Medicine and has had varied experience in psychiatry in Massachusetts, Ohio and Puerto Rico.

Dr. Robert A. Wilcox, who is joining the student health service, interned at University Hospitals and was a student assistant in the Student Health Service in 1947.

MARRIAGE ANNOUNCEMENTS

Kelleher-Flynn

Miss Marion Kelleher, daughter of Mrs. Lewis J. Kelleher, of Des Moines, and Dr. Robert E. Flynn, son of Mrs. William Flynn, of Albia, were married June 11 at the Church of Christ the King in Des Moines. The couple will live in Iowa City, where Dr. Flynn is beginning a residency in radiology at the University Hospitals.

DEATH NOTICES

Blackburn, Guy Robert, 54, Lee County coroner and resident physician and surgeon at the Santa Fe Hospital, Fort Madison, died there June 20, having suffered a stroke May 12. Born in Pennsylvania, Dr. Blackburn was graduated from Chicago College of Physicians and Surgeons in 1917. He served in the First World War as a transportation surgeon and spent 23 years at the Santa Fe Hospital in Topeka, Kan., before coming to Burlington six years ago. He was a member of the Lee County and Iowa State Medical Society.

Soley, Mayo Hamilton, 42, dean of the University of Iowa College of Medicine since July 1, 1948, died June 21. Born in Malden, Mass., Dr. Soley was graduated from Harvard Medical School in 1933 and served his internship at Massachusetts General Hospital. He was associated with the University of California from 1935 until coming here, having been assistant dean and professor of medicine there since 1942. He was a member of the Johnson County and Iowa State Medical Societies.

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PELVIC PAIN IN WOMEN

William F. Mengert, M.D., Dallas, Texas

It has been customary to regard all feminine pain located anatomically between the umbilicus and the perineum, and even from the midthighs, as originating in the generative apparatus, especially if it appears with, or is exacerbated by, the menses. It matters little if, on examination, the pelvic organs are anatomically normal, since the idea is firmly ingrained that pelvic pain is genital pain. Even if no pelvic disease is apparent, we tend to invent disease concepts, such as cystic or prolapsed ovary, or displaced uterus, to fit the symptoms.

Pelvic pain is a strong, motivating, gynecologic symptom, and drives more patients to the physician than any other. As a corollary, the desire to eliminate pelvic pain causes many operations to be done in the name of gynecology. As evidence of this, 75 per cent of 1,320 ovaries removed during a five year period in a local hospital were histologically normal or contained only follicular or corpus luteum cysts. Dallas alone should not be used as a horrible example, because the number of normal uteri, fallopian tubes and ovaries removed throughout the country is enormous. Many, including Norman Miller, have inveighed against this removal of normal tissue. Part of the reason for the sacrifice is that, after the abdomen has been opened in a search for the cause of pelvic pain, fortitude is required to refrain from meddlesome cutting on normal organs. By the mere gesture of removal of something we convince the patient that her organs are diseased. If pain persists or recurs after operation, as it so frequently does, she is forevermore convinced that all diseased tissue was not removed. When the consulting gynecologist finally sees the unfortunate patient with persistent pelvic pain, she has a battle-scarred abdomen; she has lost her appendix, an ovary, and perhaps one or both fallopian tubes; she may have had uterine suspension which more than like-

ly did not hold, *but she still has pelvic pain.*

The uterus, tubes and ovaries are innervated from the autonomic nervous system. Consequently, pain can be mediated from them only as visceral sensation, since there are no receptor end organs for pain. Therefore, sensations from the female genitalia are produced in precisely the same fashion as visceral sensations from the intestine, liver or spleen. The parietal perineum, the vagina, and the external pudendal region are innervated by somatic or myelinated fibers. Therefore, pain sensations can and do originate directly from these regions.

Pelvic pain can be classified as follows:

- A. Pain of genital origin
- B. Pain of extragenital origin
 - 1. Pelvic neurosis
 - 2. Pain originating in other pelvic structures
 - a. Pelvic girdle (bone, ligament and muscle)
 - b. Urinary tract
 - c. Intestinal tract

A. Pain of Genital Origin

Pathologic conditions responsible for pelvic pain of genital origin are similar to those producing pain elsewhere in the abdomen, and include peritoneal irritation, traction on mesentery or peritoneum, distention of a viscus or tissue space, pressure, spasm, rupture of a viscus. Examples of each of the above would include:

- 1. *Peritoneal irritation:* localized infection in tumors, pelvic inflammatory disease of gonorrheal origin, pelvic cellulitis, extrusion of the contents of a cyst, hemorrhage.
- 2. *Traction:* uterine prolapse, adhesive bands from an old pelvic inflammatory condition, or possibly from a cervical tear sustained at childbirth, twisting of a pedunculated tumor.
- 3. *Distention:* acute bladder retention, periodic distention of endometrial implants.
- 4. *Pressure:* a growing tumor, incarcerated in the pelvis. (Pressure pain is seldom, if ever, seen as a symptom of a freely movable tumor.)

5. *Spasm*: acute cystitis, spastic colitis, ureteral colic, and spasm of the uterus in dysmenorrhea and in labor.

6. *Rupture of a viscus*: rupture of the uterus, fallopian tube or urinary bladder.

In addition, some conditions which do not cause pain should be mentioned. For example, it is extremely unlikely that the retroverted, freely movable uterus, the ovary containing a few follicular cysts, or a freely movable uterine or ovarian tumor can cause pelvic pain.

I have been interested in what happens following sudden hemorrhage into the abdomen. During the past several years we have injected between 50 and 500 cc. of blood into each of 12 relatively normal women about to be laparotomized for such causes as sterilization and benign tumor. Two patients were injected with pooled plasma, and during the same period of time three patients with accidental massive hemorrhage were observed. Blood was taken from the antecubital vein and injected directly, without citration or other preparation, into the peritoneal cavity. Patients were operated on within the next 24 hours, and in each instance blood was found in the peritoneal cavity. A typical reaction was a feeling of fullness after 40 to 200 cc. of blood were injected. This lasted 15 minutes to two or three hours, and in some instances prevented the patient from eating the next meal. Usually the fullness was said to be similar to gas pains or bloating, and some of the patients were relieved by belching or passing gas per rectum. Following the initial reaction of fullness, there was a generalized lower abdominal dull aching, seldom lasting more than one hour. There was minimal tenderness, but no rigidity to palpation. Five of the 12 patients had a slight elevation of temperature, never exceeding 1 degree F. Three of the 5 patients exhibited leukocytosis, with a maximum rise during four hours of 8,000 white cells. Both fever and leukocytosis accompanied the larger amounts of blood, and both disappeared by 12 hours after injection. In other words, 9 women had no leukocytosis and 7 no fever.

When the peritoneal cavity was opened the blood was liquid, with occasionally a few small clots. Actually, it ran out when the injected quantity was more than 200 cc. In a few patients there was questionable, but never definite, redness of the visceral and parietal peritoneum. With plasma, on the other hand, punctate redness of the peritoneum was observed, and the symptoms were more marked and definite than with blood.

Brief description of the 3 patients with accidental hemorrhage follow:

Patient No. 1. During operation an omental

artery apparently was not ligated. Six hours later the patient went into shock and was placed in Trendelenburg position. Following this, she complained of shoulder pain, but only as long as she remained in Trendelenburg. She had no other pain.

Patient No. 2 fainted at home and was in shock when first seen. The abdomen was flaccid, but there was minimal lower abdominal tenderness. At operation, approximately 2,000 cc. of blood from a ruptured interstitial ectopic pregnancy were found free and unclotted in the abdomen. Later, when the patient could answer questions rationally, she had no remembrance of pain.

Patient No. 3. Five minutes after an especially vigorous coitus she complained of cramping and slight generalized abdominal tenderness. After enduring this for some hours, she sought relief at the hospital, and 12 hours postcoital a ruptured spleen was removed. Approximately 1,000 to 1,500 cc. of blood were in the abdominal cavity.

All three patients survived. It would seem that, when abdominal hemorrhage is so massive as to induce shock, the patient is unaware of any mild irritation occasioned by the presence of blood.

B. Pain of Extragenital Origin

1. *Pelvic Neurosis*: Pelvic neurosis constitutes one of the largest single causes of pelvic pain. Several examples may serve to emphasize this statement.

A young married woman, the mother of several children, was referred because of gradually increasing and intractable pelvic pain, present over a period of months. No physical basis could be found for the pain. A considerable amount of conversation with the patient ultimately revealed an intolerable home situation. Explanations to the patient improved the pain slightly. Some time later, however, she divorced her husband and since then has been free of pelvic pain.

A second patient was operated on for ruptured tubal pregnancy, and only the right fallopian tube was removed. Thirteen months later she returned with a complaint of pain for the past month. In other words, she was free of pain for 12 months after operation. This time the home situation involved the old fashioned triangle. The patient could hardly be convinced that this might be the cause of her pelvic pain and at one time even wanted exploratory laparotomy. However, she changed her mind, ultimately resolved the home situation, and her pelvic pain also disappeared.

Not so fortunate as these two young women was the young matron with one child who appeared to find out why she could not become pregnant. Some time before she had been operated

upon in a local hospital, and, according to the department of pathology, two normal fallopian tubes had been removed. Reconstruction of the story indicated that this girl, a young war bride, immediately became pregnant. Her husband went overseas, and she bore the entire physical and emotional burden of giving birth to her child alone and away from her family. Puerperally, she developed pelvic pain and consulted the local doctor, who operated upon her, with the results mentioned above. The husband returned from war, and the poor girl discovered that she could not become pregnant. Obviously, the pelvic pain originally was due to the emotional disturbance of pregnancy, the war, and her husband's absence. The great tragedy for her was that the physician who operated on her did not realize this.

We must realize that sexual incompatibility, infidelity, the emotions surrounding pregnancy, or failure to become pregnant, and even the feminine pursuit of man, are powerful driving forces. In other words, the basic aspects of a woman's life are more closely related to her femininity than those of a man to his masculinity.

2. *Pain originating in other pelvic structures:*

a. *Bony and muscular stresses and strains* surrounding the pelvic girdle undoubtedly cause most of the backaches of pregnancy and some of those accompanying the menstrual periods. Detailed discussions of these aspects of extragenital pain are readily available elsewhere and therefore will be omitted here. It is, however, desirable to point out that injury to the anterior aspect of the capsule and ligaments of the sacroiliac joint will often be expressed as lower abdominal pain and tenderness. In other words, the region of ovarian pain is also the region of sacroiliac pain. Differential diagnosis can readily be made by deep palpation.

b. *Urinary tract diseases*, the commonly recognized ones such as cystitis, pyelonephritis and ureteral stone, are usually readily diagnosed. Less obvious is the syndrome associated with posterior urethritis, so adequately described by Folsome. In general, there is pain sometimes over the course of the lower half of the ureter, abdominal pain above the symphysis, and often pain radiated to the anterior aspect of the corresponding thigh. Virtually always there will be associated urinary symptoms, such as frequency or urgency. In other words, posterior urethritis is seldom present without definite urinary symptoms.

c. *Intestinal tract diseases*, including colitis, diverticulitis, and appendicitis, are usually recognized as such, except that appendicitis and pelvic inflammatory disease are frequently confused with each other.

What can be done about the situation? Since the diagnosis of pelvic neurosis is always difficult to make, and the painstaking uncovering of an emotional situation that the patient is loath to disclose is a time-consuming process, we cannot always diagnose the precise cause of pelvic pain. We cannot even be sure whether or not the pain is of genital or extragenital origin. We can, however, usually differentiate between anatomically normal and anatomically abnormal pelvic organs. We can refuse to operate except in the presence of well defined and recognized disease entities. There is but one exception to this general rule; namely, exploration is justifiable in the presence of prolonged and persistent pain of obscure origin. Occasionally, gynecologic disease will be revealed. Most often we will find nothing of moment. If nothing unusual is found and the ultimate diagnosis, therefore, is pelvic neurosis, above everything else, we must do no meddlesome cutting. It only makes the situation worse.

CUTANEOUS REACTIONS TO SOME OF THE ANTIBIOTIC DRUGS IN MEDICINE

Robert L. Barton, M.D., Dubuque

It is axiomatic that the introduction of any new drug will almost invariably carry in its train a greater or lesser number of undesirable and often serious adverse reactions. So true to form does this phenomenon behave that a physician must acquaint himself with the "thorns of his rose" before availing himself of its beneficial attributes.

The spectacular efficacy of penicillin in the treatment of hitherto resistant diseases was joyfully hailed around the globe. For a time it was deemed a nontoxic drug, but this illusion was, indeed, short-lived. As early as 1944, Binkley and Brockmole,¹ Pyle and Rattner,² and Silvers³ published independent reports upon the occurrence of dermatitis venenata resulting from local contact of the skin with penicillin.

That penicillin is a potent contact sensitizer is now well established. It is estimated that from 10 to 20 per cent of patients exposed to penicillin by contact on the skin will develop acute contact dermatitis at the sites of exposure.

As might have been anticipated, workers in drug houses manufacturing the drug were among the first to demonstrate the sensitizing qualities of penicillin. Weiss⁴ reported the occurrence of 7 cases of contact dermatitis in a pharmaceutical plant.

Whereas in most instances the individuals developing sensitivity to penicillin have been exposed

to the drug over a longer or shorter period of time, previous exposure to penicillin does not appear to be a prerequisite for the sensitization. Thus, Cohen and Pfaff⁵ patch tested a large number of individuals who had had no known exposure to penicillin. Of these almost 1 per cent exhibited positive reactions to patch tests applied to the skin.

The contact dermatitis produced by penicillin does not differ materially from that produced by other potent sensitizers. Severe pruritus, weeping, crusting and edema follow in rapid succession. It has been my experience that the bearded portion of the face in men is a particularly frequent site of contact dermatitis due to penicillin.

Cutaneous sensitivity to penicillin poses an occupational hazard to chemists, pharmacists, nurses, veterinarians, physicians and others whose work brings them into contact with the drug.

One of my colleagues, an ophthalmologist, suffered from pruritus, lichenification, and fissuring of the thumb and forefinger of the right hand for several weeks, until we established the fact of his sensitivity to penicillin by patch test. The simple expedient of wearing rubber finger-cots while instilling penicillin preparations into the conjunctival sac has eliminated his eruption.

Nor is contact dermatitis confined to the skin alone. Numerous instances have been reported in which cheilitis, stomatitis and glossitis have followed the use of penicillin lozenges and troches.

The intramuscular, intravenous or subcutaneous administration of penicillin is attended by a wide variety of undesirable phenomena. The severe local reaction at the site of injection is sometimes alarming. An injection administered in the deltoid muscle may produce tremendous edema, redness and pruritus of the entire arm within 48 hours.

Toxic reactions, widely generalized, are seen within two or three days following injection of the drug. These may be morbilliform or scarlatiniform, and at times may proceed to universal exfoliative dermatitis.

By far the most common reaction to the administration of penicillin, however, is the development of urticaria. Not less than 1 patient in 10 develops hives after receiving penicillin. In these patients the urticaria appears from 7 to 12 days after administration of the drug. The urticaria may assume giant proportions and often is accompanied by angioneurotic edema of the extremities, genitalia, lips or eyelids. Concomitant edema of the larynx has resulted in death in a small number of reported cases.

Occasionally the urticarial eruption is accompanied by malaise, fever and painful swollen joints, which render the syndrome indistinguishable from

that of serum sickness. These reactions may be so severe that they closely mimic septicemia or acute lupus erythematosus. Sawicky and Rein⁶ described the case of a patient treated for several weeks with penicillin orally who became acutely ill following intramuscular injections of penicillin.

Dermatologists have long recognized the fact that an individual suffering from ringworm of the scalp, the feet, or other parts of the body, may become sensitized to an antigen elaborated by the fungus. Following the dissemination of this antigen via the blood stream, the patient may develop a widespread eruption within which no living fungi may be found. This peculiar efflorescence of lesions has been described by the term "trichophytid" or, more colloquially, as the "id" reaction.

We have experimental evidence to indicate that fungi produce not only specific but also nonspecific antigens to which they sensitize their hosts. It is probable that the fungus *Penicillium notatum* produces a nonspecific antigen which is capable of producing the marked focal exacerbation between the toes and in the groin of an individual previously sensitized by an episode of tinea pedis or tinea cruris.

Patients who receive penicillin therapy will occasionally develop an acute dermatitis between the toes and in the genitocrural areas, which closely mimics the focal reaction produced in highly sensitized individuals receiving trichophytin intracutaneously.

Turning now to streptomycin, we again find a drug whose remarkable therapeutic properties are tempered with some drawbacks. I shall not discuss the well known eighth nerve damage, including tinnitus, vertigo and deafness, nor shall I discuss the renal complications which attend administration of the drug, but I shall limit myself largely to the cutaneous evidences of intolerance.

A wide variety of eruptions has been seen in the use of streptomycin. As with penicillin, instances of contact dermatitis were noted early by several observers. Nichols and Herrell⁷ described instances of occupational dermatitis in individuals whose work brought them into contact with streptomycin.

More recently, Johnson and Pratt⁸ reported a well studied instance of dermatitis venenata in a nurse engaged in administering the drug. The patient exhibited positive patch tests to streptomycin and promptly exhibited a recurrence of her dermatitis upon re-exposure to the drug.

I have seen numerous examples of sensitivity of patients to streptomycin ointment when the latter was applied to patients suffering from syphilis vulgaris, a condition in which the drug is spectacularly beneficial, notwithstanding the fre-

quency of reactions. Feldman⁹ has cited the history of an interesting patient in whom an acute dermatitis venenata was provoked upon the legs by the use of streptomycin ointment.

The cutaneous reactions seen following the internal administration of streptomycin are few or numerous, depending upon the observer. Madigan and Swift,¹⁰ treating 14 patients with an average dose of 1.2 gm. per day for 90 days, stated, "... such reactions, though diligently searched for, were not seen." On the other hand, The National Research Council¹¹ reported that reactions to the drug increased directly as the daily dose was increased. Of patients receiving 3 gm. a day 46 per cent had reactions of one type or another, and in doses of 4 gm. per day 60 per cent exhibited reactions.

There is little doubt that many of the earlier reactions noted, simulating histamine shock, were attributable to an impurity in the drug, since these could be eliminated by using purified extracts of streptomycin.

More recent reports indicate that many cutaneous reactions may be laid at the door of the pure drug, however. While The National Research Council listed 49 cutaneous eruptions in a series of 1,000 patients treated with streptomycin, none exhibited an eruption which one might describe as peculiar to the drug. The eruptions were of erythematous, urticarial, maculopapular or hemorrhagic character, and were sometimes accompanied by fever. Eosinophilia not only was a frequent concomitant feature but often persisted after the abatement of the eruption.

In a well presented study of 33 patients receiving moderate doses of streptomycin over a long period of time, Steiner and Fishburn¹² carefully described 6 individuals with cutaneous manifestations of intolerance. Five of these developed their eruption from the seventh to the ninth day after commencement of treatment. The time of the appearance of the eruptions and their non-specific character led the above authors to comment on the similarity of this reaction to that following the administration of arsenic drugs in the treatment of syphilis, which was described by Milian as "Erythema of the Ninth Day."

It is especially noteworthy that resumption of streptomycin therapy in those individuals who exhibited cutaneous intolerance was not attended by any recurrence of an eruption or by any other toxic manifestation. They were inclined to regard the eruptions seen in streptomycin therapy as allergic rather than toxic phenomena. They do not regard such eruptions as contraindications to further use of the drug in the individual under treatment.

Without doubt, we shall soon be apprised of reactions from the more recent antibiotics, like dihydrostreptomycin, neomycin, bacitracin, and chloromycetin, but my own experience with these drugs has not been sufficient to permit any comment.

Discussion

Ruben Nomland, M.D., Iowa City: Dr. Barton has covered well, in such a brief paper, the eruptions produced by the internal administration or external application of the antibiotics. The incidence of untoward reactions is probably 10 per cent in the case of penicillin but will probably be considered higher with streptomycin. Reactions from the external use of the antibiotics are less likely to occur in normal skin and most liable to appear where there is previous inflammation or chronic infection of the skin; there is a high incidence of dermatitis from penicillin when it is used in the treatment of dermatitis or in chronic types of skin infections, such as chronic impetigo.

A very important fact for consideration is that a person sensitized externally to penicillin (and this may prove to be true for streptomycin) is then sensitive to parenteral or even oral treatment. One may cure a person of his impetigo with penicillin, but it will sensitize him to the drug, so that he gets an adverse reaction if the drug is subsequently given for a serious systemic infection. I do not believe that penicillin should be used either externally or internally for any minor disease, which may be better treated by other and simpler methods.

An interesting relationship appears in the cross sensitivity of penicillin and various of the superficial fungi of the Trichophyton group. Some individuals whose skin is sensitized to Trichophytons, as shown by a positive trichophyten test, develop dermatitis of the toes, groin, and occasionally the fingers, following injection of penicillin. Frequently such people show no reaction to patch or intradermal tests with penicillin but do have a positive trichophyten reaction. Also, patients who develop other types of eruptions from penicillin have a much higher incidence of sensitivity to the superficial fungi, as evidenced by the positive trichophyten test.

In our experience the most common penicillin reaction from internal medication has been severe urticaria whose incidence was high when the penicillin was given in oil and wax. The incidence is much less with aqueous and the newer long-acting type of injections. Dermatitis of a semi-exfoliating type, nonspecific drug eruptions, trichophytid-like eruptions, and most of the ordinary drug eruptions, can be caused by penicillin. In some instances, especially in urticaria, the use of antihistaminic drugs relieves the symptoms of the eruption.

As Dr. Barton has indicated, we are already seeing contact dermatitis from topical application of streptomycin, even though it has been used only a short time. We observed 4 cases out of 7 nurses at Oakdale who prepared the streptomycin solution for in-

jection, and we anticipate a great deal of trouble from streptomycin when its local use becomes more widespread.

BIBLIOGRAPHY

1. Binkley, G. W., and Brockmole, A.: Dermatitis from penicillin: report of 2 cases. *Arch.Dermat.&Syph.*, 1:326-327 (November) 1944.
2. Pyle, H. D., and Rattner, H.: Contact dermatitis from penicillin. *J.A.M.A.*, cxxv:903 (July 29) 1944.
3. Silvers, S. H.: Contact dermatitis from amorphous sodium penicillin. *Arch.Dermat.&Syph.*, 1:328-329 (November) 1944.
4. Weiss, R. S.: Discussion. Cutaneous reactions to penicillin: Templeton, H. J., Lunsford, C. J., and Allington, H. V. *Arch.Dermat.&Syph.*, lvi:325-338 (September) 1947.
5. Cohen, T. M., and Pfaff, R. O.: Penicillin in dermatologic therapy; report of results in 100 cases. *Arch.Dermat.&Syph.*, li:172-177 (March) 1945.
6. Sawicky, H. H., and Rein, C. R.: Severe reactions to penicillin. *Arch.Dermat.&Syph.*, lviii:83-84 (July) 1948.
7. Nichols, D. R., and Herrell, W. E.: Streptomycin; its clinical uses and limitations. *J.A.M.A.*, cxxxii:200-206 (Sept. 28) 1946.
8. Johnson, S. A. M., and Davis, H. P.: Streptomycin, cause of dermatitis venenata in a nurse; report of a case. *Arch.Dermat.&Syph.*, lix:245-247 (February) 1949.
9. Feldman, M. D.: Contact dermatitis from topical application of streptomycin ointment. *Arch.Dermat.&Syph.*, lvii:1048-1050 (June) 1948.
10. Madigan, D. G., Swift, P. N., and Brownlee, G.: Clinical and pharmacological aspects of toxicity of streptomycin. *Lancet*, i:9-11 (Jan. 4) 1947.
11. National Research Council, Committee on Chemotherapeutics and Other Agents; Chairman, Keefer, C. S.: Streptomycin in treatment of infections: a report of 1,000 cases. *J.A.M.A.*, cxxxii:70-76 (Sept. 14) 1946.
12. Steiner, K., and Fishburn, G. W.: Cutaneous eruptions from streptomycin. *Arch.Dermat.&Syph.*, lvi:511-516 (October) 1947.

LOWER NEPHRON NEPHROSIS

George D. Jenkins, M.D., Burlington

Lower nephron nephrosis is a highly fatal renal lesion characterized by acute renal insufficiency. This type of renal lesion occurs as a complication to a variety of conditions but results in a definite clinical syndrome.

Menami described the condition following World War I. Bywaters described it again in 1940, associating it with crushing injuries during the bombings of England. It has been called the most frequent fatal form of renal sequelae occurring during World War II. The variety of conditions in which it may occur include intravascular hemolysis occurring with transfusion reactions, black water fever, transurethral prostatic resection, quinine sensitivity, crush syndrome, electrical injury to muscle, heat stroke, after abortion, alkalosis, excessive vomiting, thermal burns, sulfonamide sensitivity, and from various poisons including carbon tetrachloride, all of which produce the same clinical and histopathologic features.

Clinically, the onset is usually insidious. Patients often develop nausea, vomiting, weakness, malaise, sometimes pain in the back or abdomen, and, either gradually or suddenly, oliguria or anuria. This decrease in urinary output may be so gradual that it is overlooked, due to the severity of the general manifestations. After anuria or oliguria has started, edema usually occurs, the blood pressure rises, the nonprotein nitrogen be-

comes elevated, acidosis is present, and death usually occurs from pulmonary edema.

The histopathology shows lipid vacuolation of the ascending limbs of Henle's loop about 18 to 24 hours after the onset and, 36 to 72 hours after onset, precipitation of pigment casts in the distal convolute and collecting tubules. Dilatation of the proximal, and sometimes the distal convolute, follows pigment precipitation. By the third, fourth or fifth day necrosis and regeneration of the epithelium in the ascending portions of Henle's loop and in the distal convolute tubules are present. About the fifth day rupture of the tubules is frequent. There is no significant change in the glomerular capillaries. Edema of the interstitial spaces is frequently seen. The basement membrane of the tubules is generally intact. Re-epithelization of the tubules is generally completed in two weeks after onset.

The primary cause of lower nephron nephrosis is generally believed to be cortical ischemia of the kidney. This has been explained by Trueta and his collaborators on the basis of a neurovascular defense mechanism. Arterial spasm may reduce the blood volume reaching the kidneys and may be associated with a short circuiting of intrarenal circulation, so that all or a part of the blood flowing through the glomeruli of the peripheral two thirds of the cortex is shunted through the medulla. This means that the tubules receiving their blood supply from the glomerular vessels are deprived of part or all of their blood supply and may be damaged if the ischemia is severe or prolonged.

The immediate effect of shock from hemorrhage, trauma or dehydration is a decrease in the renal blood flow and renal function, which may lead to complete anuria. There is a compensatory constriction of the nonrenal peripheral vessels, and, if the circulating blood volume loss is not too severe, renal blood flow may return quickly. If, however, shock is severe, the kidney may be included in this constriction. Renal constriction may occur, even though the systolic blood pressure is 100. Van Slyke has designated two phases of shock on the kidney: the first phase in which there is renal ischemia, and the second phase in which renal cell damage takes place.

Nitrogen retention to the degree of uremia is present in all cases. It is a symptom, however, and has no bearing on the final outcome. Death is due to a factor other than uremia, since about 50 per cent will succumb within the first six days. It is known that man will survive complete renal shutdown for a period of two to three weeks when the cause is on a strictly renal basis, such as removal of a solitary kidney or bilateral ureteral block from any cause. There is considerable evi-

dence that potassium intoxication, through alteration in cardiac mechanism, is responsible for the fatal outcome in lower nephron nephrosis.

In Lucké's series of 100 fatal cases, 95 per cent died within 14 days, 86 per cent within 10 days, 48 per cent within six days, and there were no deaths after 20 days. The striking fact is that death from this syndrome occurs early in the course of disease. The mortality is high; of the cases reported by the Army Institute of Pathology 90 per cent of the patients died.

In considering treatment it is well to remember that the essential factor producing this fatal renal lesion is renal ischemia or anoxia, and that the most important phases of treatment are preventive measures to combat the shock responsible for renal ischemia by the use of whole blood, plasma and fluids. After the onset of oliguria or anuria, treatments suggested are many and varied. These include spinal anesthesia, splanchnic block, intravenous procaine, decapsulation of the kidneys, or capsulotomy, transfusion, use of the artificial kidney, and peritoneal lavage. Many of these suggested treatments, though heroic, fail to take into consideration that the renal lesion may be transient. It is well to re-emphasize here that man can survive complete anuria for two to three weeks, so treatment must be directed toward water and electrolyte balance, remembering that only those patients who can regenerate adequate functioning renal tissue will survive.

Theoretically, a 70 Kg. man who suddenly lost all function of both kidneys would lose 1,000 cc. of water by evaporation from the lungs and skin. Without sweating there would be no loss of electrolyte. In the absence of eating there would be a rapid depletion of the body stores of carbohydrates. There would be approximately 70 gm. of body protein and 200 gm. of body fat burned daily. This catabolism would lead to the accumulation of ketone acids, nitrogenous waste products, potassium, sulfate and phosphate in the body. Pre-formed water and water of oxidation, in the amount of 470 cc. daily, would be released, leaving a deficit of 530 cc. The nitrogenous waste products would be distributed throughout the entire body, as would the level of potassium. The negative water balance would lead to cellular dehydration. From these theoretical considerations it is readily seen that the patient should not be flooded with fluids, that dextrose should be given to reduce the protein breakdown, and that distilled water should be used to maintain electrolytic equilibrium.

During the period of shock whole blood or plasma should be given to restore a normal circulating blood volume. If dehydration is present,

normal saline is given. When the urine volume is decreased or anuria is present, fluids are restricted. In most patients 1,000 cc. to 1,500 cc. of fluid per 24 hours will be sufficient. A high caloric intake should be provided. In the absence of vomiting or Wangensteen drainage 10 to 15 per cent dextrose in distilled water is used to provide caloric intake and maintain electrolytic balance. In the presence of vomiting by Wangensteen drainage the amounts of salt lost should be replaced by the addition of saline to the dextrose and distilled water. If acidosis is present, sodium lactate or sodium bicarbonate is given.

During the stage of recovery, second to third week, diuresis takes place. Treatment is then directed to replacing the amount of fluid lost through diuresis, using the 24 hour urine volume as the index to the quantity of fluid given. The kidney during this stage does not conserve salt, so salt depletion must be avoided by giving saline. By this time the danger of drowning the patient has passed.

Case Reports

Case No. 1.

Mr. G.H.S., male, age 88, had been in good health until two days prior to admission, at which time he developed nausea and vomiting. He had been unable to retain foods or fluids for a period of 48 hours. The cause of the nausea and vomiting was unknown. He had been living alone, and on the evening of the second day his daughter visited him and noted he had not voided all day. The family physician was called, and he catheterized him but obtained no urine. He was then hospitalized. Physical examination revealed a poorly nourished and dehydrated individual. He was oriented and complained of nausea. Prostate was only slightly enlarged; blood pressure, 180/100. Indwelling urethral catheter was placed in bladder, and there was no urine. On admission the blood urea nitrogen was 64 mg. per 100 cc. blood.

He was given 500 cc. 10 per cent dextrose in saline intravenously and sedation. The nausea subsided, and he was able to eat small amounts of food and to drink fluids. After four hours excretion of urine commenced. The first 12 hours 600 cc. was excreted; this gradually increased to 1,550 cc. in the next 12 hours and became adequate. The catheter was removed six days after admission, and he voided easily and emptied the bladder completely. The blood urea nitrogen gradually improved and at the time of his dismissal 10 days later was 36 mg. per 100 cc. blood.

Therapy in this case consisted of fluids, sedation and high carbohydrate diet, particular care being taken not to overload the cardiovascular

system of an 88 year old with excessive fluids. Saline and 10 per cent dextrose were used to replace the chlorides lost by vomiting, and, as soon as he could retain fluids by mouth, intravenous fluids were stopped. High carbohydrate diet was to conserve protein catabolism.

Follow-up reveals he is in good health four months after dismissal.

This case illustrates anuria due to dehydration and loss of chlorides through vomiting, resulting in complete renal shutdown.

Case No. 2.

Mr. E.A.J., male, age 82, had a typical history of bladder neck obstruction, progressing gradually to complete retention of urine. At the time he was admitted to the hospital he had complete retention of urine, with 600 cc. clear residual urine. The blood urea nitrogen at the time of admission was only slightly elevated. After one week of catheter drainage a transurethral prostatic resection was done, using spinal anesthesia. During the resection the blood pressure dropped to a systolic of 80 but was promptly returned by use of a vasopressor. His postoperative condition for 24 hours was good. However, the urinary output decreased, and on the third postoperative day was 120 cc. per 24 hours. Blood urea nitrogen was 80 mg. per 100 cc. blood, and temperature was elevated to 103 F. Intravenous 10 per cent dextrose in distilled water was given. The urinary output gradually increased, being 720 cc. the following 12 hours, 840 cc. the next, and 1,440 cc. the next 12 hours. After the sixth postoperative day the output was adequate, and an uneventful recovery was made.

This case illustrates two factors; namely, the role that shock and intravascular hemolysis play in lower nephron nephrosis. The period of shock during spinal anesthesia, while of short duration, produced a lowering of venous pressure below that of the irrigating fluid. This then permitted the irrigating fluid, distilled water, to enter the circulation, producing intravascular hemolysis. The combination of hemolysis and shock produced sufficient damage to the lower nephron to bring about oliguria and uremia.

Case No. 3.

Mrs. N.B., age 21, while riding on the right front fender of her husband's car, either fell or was struck by some object, throwing her to the ground. She stated that the automobile did not run over her body. She was picked up by her husband and brought to the hospital.

At the time of admission the patient was conscious but restless. Blood pressure was 100/60. Abdomen showed moderate generalized rigidity. Six hours after admission she voided 100 cc. clear

urine. She was given intravenous 10 per cent dextrose in normal saline and plasma. The urinary output gradually diminished and was 20 cc. for the 24 hour period on the third day following the accident. The nonprotein nitrogen was 90 mg. Intravenous procaine was given in an effort to stimulate urinary output. Her condition became progressively worse, and she died from cardiac failure five days following the accident.

An autopsy showed hemorrhagic areas throughout the omentum and moderate retroperitoneal hemorrhage in the upper abdomen, especially in both renal areas. No viscera, either solid or hollow, had been ruptured. Both kidneys were large, swollen and pale, and histologically showed the typical lesion of lower nephron nephrosis.

Summary

1. Attention has been called to lower nephron nephrosis and to the great variety of conditions which it may complicate. The histopathology has been briefly discussed and therapy suggested.

2. Three cases of varied etiology have been presented.

BIBLIOGRAPHY

1. Lucké, B.: Lower nephron nephrosis (renal lesions of crush syndrome, of burns, transfusions, and other conditions affecting lower segments of nephrons). *Mil.Surgeon*, xcix:371-396 (November) 1946.
2. Thorn, G. W.: Treatment of renal insufficiency. *J.Urol.*, lix:119-148 (February) 1948.
3. Van Slyke, D. D.: Effects of shock on kidney. *Ann.Int. Med.*, xxviii:701-722 (April) 1948.
4. Goormaghtigh, N.: Renal arteriolar changes in anuric crush syndrome. *Am.J.Path.*, xxiii:513-529 (July) 1947.
5. Koletsky, S., and Gustafson, G. E.: Effects of temporary cessation of renal blood flow in rats. *J.Clin. Investigation*, xxvi:1072-1078 (November) 1947.
6. Strauss, M. B.: Acute renal insufficiency due to lower nephron nephrosis. *New England J.Med.*, ccxxxix:693-699 (Nov. 4) 1948.
7. Bywaters, E. G. L., and Dible, J. H.: Renal lesion in traumatic anuria. *J.Path. and Bact.*, liv:111-120 (January) 1942.
8. Leiter, H. E.; Kroop, I. G.; Fishman, A.; and Hyman, A.: Management of acute nonobstructive renal insufficiency. *J.Urol.*, lxi:163-171 (February) 1949.
9. Friis, N. P.: Sulfathiazole anuria cured by means of intravenous procaine treatment. *J.Urol.*, lxi:184-186 (February) 1949.
10. Williams, R.: Lower nephron nephrosis. *Tr. South Central Am.Urol.Assoc.*, p. 93-96, 1947.

INTRACAPSULAR CATARACT EXTRACTION BY SUCTION

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The term "cataract" is derived from the Latin name "suffusie," which in turn arose from the translations of medieval Arabic, expressing the early interpretations of its pathology, "the humor that flowed down into the eyes."¹

Quarré, in 1643, taught that a cataract was an opacity of the lens, and later Daviel, in 1748, published an account of the extraction of the crystalline lens from the human eye.¹

We may rightfully concur that man has interested himself for a long time in this subject of lost vision caused by opacities of the lens, and

certainly for some 200 years he has concerned himself with methods of treating this condition and the restoration of useful vision.

Throughout the years many technics have been devised for removing the opaque lens, and today we are all aware of the ever changing progression of new and improved methods, always endeavoring to give to more and more people better and better vision.

You are all familiar with the various types of cataracts, including the senile, congenital, traumatic and complicated varieties.

The loss of transparency, in a senile cataract, is probably caused by a physical-chemical alteration within the lens which causes a disturbance of the intimate structures whereby a large amount of water is bound within the fibers to form a colloid system. There are two known and recognizable changes: the one, a swelling opacity which is a reversible change, and the other is a coagulation opacity which is an irreversible change.¹

There are many theories regarding the etiology of cataracts, such as (1) the biologic theory, or an expression of senility and inherited susceptibility, (2) the immunologic theory in which the lens protein acts as an antigen, (3) a functional basis whereby excessive accommodation has a deleterious effect on the lens fibers, (4) the theory of local metabolic disturbances, such as restricted supply of nutrition and a shrinking of the nucleus, allowing space for the absorption of water, and finally (5) the various general metabolic diseases and degenerations caused by general toxemias, deficiency diseases and endocrine dysfunctions.¹

The histologic structure of the crystalline lens is familiar, and the fact that the anterior capsule is the thicker allows for the more recent technics in the extraction of the cataract within its capsule.

A complete discussion of any method for extracting cataracts could, and should, include many important details which here may only be briefly mentioned. A complete history in every detail of past and present health and physical afflictions, and certainly a presurgical physical examination with the utmost care, taking advantage of all the modern facilities, is most vital. The presurgical preparation of the surgical site, as well as a preparation of the general physique, is of paramount importance. The use of antibiotics preceding and following surgery has been one of the more recent additions to our armaments. These are all important factors if we are to obtain the most successful results from our surgical efforts.

I do not propose any one special method for the removal of the senile cataract to be the best, but rather I desire to give a brief review of one

satisfactory method of intracapsular extraction which gives gratifying results, in that there is a minimum of postoperative reaction and a high per cent of excellent visual results. I am mindful that there are several technics in vogue today that give good results, and, to be sure, each operator should use only that method by which he obtains his best results.

The mechanical vacuum pump was devised by Dr. Barraquer, of Spain, and used rather extensively by several men in this country.

The hollow cuplike instrument called the erisiphake is connected to the pump by rubber tubing and applied to the anterior capsule of the lens, the suction produced grasping the lens.²

The most successful operation for the removal of cataract is one in which there is a minimum of trauma and manipulation of the eye.² The erisiphake can be applied to the capsule with little or no pressure, and once the vacuum is produced the pump sets up rapid vibrations which are transmitted to the lens.³ Furthermore the vacuum causes the capsule to mould into the cup, changing the general shape and contour of the lens, which aids in the rupture of some of the fibers of the zonule. A gentle pressure from without, over the zonule below, completes the freeing of the lower fibers, and at the same time a rotation of the lens frees the posterior capsule from the patellar fosa, permitting delivery of the lens.³ Those cases with adequate dilatation of the pupil to permit extraction through a round pupil are delivered by a tumbling maneuver after two or three small peripheral iridotomies are placed at 10 and 2 o'clock, or 10, 12 and 2 o'clock, as desired. Whenever the dilatation is inadequate or the cataract is too large, the lens may be delivered without tumbling after performing an iridectomy at 12 o'clock.

Some of the advantages of the erisiphake are as follows:

1. It permits an accurate regulation of the force grasping the lens; hence, fewer ruptured capsules. In the case of a thin or delicate capsule, as observed by the slit-lamp and previous studies of the eye, a vacuum of 50 mm. of mercury or less may be used, while in the case of a younger individual with tougher zonular ligaments the vacuum may be increased to 60 mm. of mercury or more.

2. The vibrations of the pump transmits movements to the lens which aid in rupturing some of the fibers of the zonule.³

3. The absence of pressure when applying the cup prevents rupture of the hyaloid and possible prolapse of the vitreous.

4. The smooth cup is safe and excellent for freeing the posterior synechia in cases of glaucoma

with cataract, with little danger of rupturing the capsule, and thus still permitting an intracapsular extraction in the type of case where one wants, above all others, to produce a minimum amount of trauma and postoperative reaction.

There are, of course, some pitfalls and difficulties one can encounter with this method, just as one meets in using forceps or in the capsulotomy method. The same may be said of general surgery, and would we not all welcome that surgical utopia where every planned maneuver could be climaxed without parrying with that great unknown of the variations in individual tissue textures, reactions and limitations.

The application of the suction tip to the anterior capsule allows possible inclusion of the pupillary border of the iris within the grasp. The vacuum can be released and reapplied with no damage to the anterior capsule. The lens can be dislocated backwards or to the side just as any other instrument applied can displace the lens, but the one big advantage of this instrument is that no backward pressure is needed, and, as a matter of fact, the lens is seen to lift up away from the fossa when the vacuum increases, thereby relieving any pressure on the vitreous body.

It is furthermore conceivable to apply the tip of the instrument near the equator and thereby aspirate the vitreous, because certainly the hyaloid membrane will not withstand a vacuum of 50 or 60 mm. of mercury.

Then, again, the capsule may rupture just as it may rupture when applying the capsule forceps, but even a per cent of these can still be completed encapsule by reapplying the tip at another site but with a reduced vacuum.

In conclusion, I want to reveal a personal experience of mine, which I am sure many can share with me. The greatest thrill and personal satisfaction I have ever experienced in the practice of medicine, or ever will in the future, God permitting, is to see the tears of joy and to hear the patient exclaim, "I can see again."

Discussion

L. H. Prewitt, M.D., Ottumwa: I want to compliment Dr. McNamee on his excellent paper.

The suction method of cataract extraction can be used in five types of cataracts; namely,

1. Lens which is hypermature. These capsules are difficult to grasp and rupture easily. The suction cup, with its traction spread over a larger area, offers an excellent method of removal.

2. Lens with capsules that are tense. These are often cases in which the zonule fibers are strong and difficult to grasp. By taking plenty of time and not angulating your suction cup, you can remove this type of cataract without rupturing the capsule.

3. Lens of which the capsule has exfoliated.

These cases you are anxious to deliver intact to prevent the complication of glaucoma capsulare. These capsules rupture easily due to the degeneration changes, and therefore this technic works well in this type of capsule.

4. Cases in which the lens must be dislocated before it is tumbled and before it is slid out of the fossa.

5. Lens in which the capsule is friable and will not stand any tension.

These five indications will respond to the suction method readily, because this method has two types of advantages:

1. The more even distribution of traction over a wider area with less likelihood of rupture of the capsule.

2. Less counterpressure is required, which is the causative factor in producing loss of vitreous. According to Barraquer, any method by which the lens is removed without pressure and excessive instrumentation is the safest means of avoiding complications.

The pitfalls of this method are three:

1. Improper selection of cases. Charles I. Thomas, of Cleveland, Ohio, decides on the technic of cataract extraction only after the anterior chamber is opened, and he has had adequate time to study the capsule, size and location of the lens.

2. Loss of vitreous. This occurs less frequently because you have less counterpressure by this technic. The syringe method of removal is best, because if the cup should accidentally come off the lens the suction stops at once. The motor-driven suction apparatus requires one more movement to turn off the motor, and, as you do so, the fluid vitreous may be aspirated. Guyton and McLean mention sucking out a great amount of vitreous in two cases but replacing the vitreous loss with normal saline; good results were obtained.

3. The third pitfall occurs when the suction cup slips off the lens. To prevent this, you must keep the suction cup parallel with the body of the lens. Any angulation may cause the suction cup to separate from the lens capsule. This need not be a hazard; simply replace it and carry out your procedure. To prevent this hazard, slowly remove the lens so that zonular fibers will have time to separate. This procedure, in the majority of cases, will prevent separation of the suction cup.

The counterindications are:

1. Fluid vitreous when due to high myopia or inflammatory processes.

2. Dislocated lens due to traumatic or congenital cataracts.

With the use of the capsule forceps, counterpressure is an important manipulation and the main cause of vitreous loss and complications; with the suction method counterpressure is relatively an unimportant part of the procedure.

BIBLIOGRAPHY

1. Duke-Elder, W. S.: *Textbook of Ophthalmology*. St. Louis, Mosby, 1941. vol. iii, p. 3115, 3117, 3157.
2. Barraquer, I.: *Thakooris*. Arch. Ophth., 11:448-450 (September) 1922.
3. Fisher, W. A.: *Senile Cataract*, ed. 2. Chicago, Eye, Ear, Nose and Throat College, 1933. chap. 2.

LATE CUTANEOUS RELAPSE FOLLOWING THE RAPID TREATMENT OF EARLY SYPHILIS WITH

PENICILLIN:

Report of a Case

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Thomas Raymond McGowan, M.D., Iowa City

That the interval between infection and the development of late syphilis is shortened by inadequate treatment is well known. The precocious development of superficial nodular and ulceronodular late cutaneous syphilis occurred frequently after inadequate arsenic therapy. A review of the recent literature fails to reveal any reports of the early occurrence of late cutaneous relapse after apparently successful treatment of secondary syphilis with penicillin.

V. B., a 38 year old white female, was first seen at the Rapid Treatment Center of the State University of Iowa Hospitals on Sept. 15, 1947, because of positive serologic tests for syphilis made one week previously. She had been divorced one year before, after 19 years of marriage, and admitted repeated sexual contacts with one man during the last 8 months. She had had no serologic tests prior to the present illness. There was a papulopustular eruption involving the neck, upper chest, extensor surfaces of the arms and forearms, and a single similar lesion on the left labium majus, all present about two weeks, according to the patient. Three small erosions were found on the anterior part of the palate, and the remainder of the physical examination was normal. The vulvar lesion was darkfield positive.

Treatment consisted of 33,333 units of aqueous penicillin intramuscularly every two hours for 108 doses, a total of 3.6 million units in nine days, accompanied by 60 mg. of mapharsen intravenously on the first, third, fifth, seventh and ninth days, and 112 mg. of bismuth subsalicylate in oil intramuscularly on the first, fifth and ninth days. No Herxheimer reaction of any sort was noted, and her course was uneventful. Darkfield examination, positive at the sixth hour, was negative by the ninth hour after treatment began. The cutaneous lesions disappeared quickly during the treatment. The spinal fluid, examined at the end of the course, contained 2 lymphocytes per cu. mm. and 29 mg. per cent of protein, and gave negative Kolmer and colloidal gold tests.

The following table shows the serologic response during the first five months after treatment:

	Kolmer	Kahn	Quantitative Kahn	Kline
9-15-47	44444	4	1:16	4
9-24-47	44442	4	1:32	4
10-23-47	4443 -	4	1:4	4
11-24-47	44 - -	1	1:1	4
12-15-47	444 - -	1	1:1	4
1-28-48	44 - -	2	1:1	2
2-23-48	42 - -	Insuf.	Insuf.	1

Because of an attack of bronchopneumonia the patient was unable to return for her six month check-up and was "lost" until Aug. 10, 1948. She stated that she did not receive penicillin during the course of her pneumonia. Upon re-examination she presented grouped nodules upon the right side of the nose and right cheek covering a triangular area measuring 3 by 4 cm. The individual lesions were 2 to 4 mm. in diameter and elevated 1 to 2 mm. Some presented an odd cystic appearance. On the right shin, about 10 cm. above the ankle, there was a shallow annular necrotic ulceration measuring 4 by 6 cm., with a central hyperkeratotic island. On the left sole there were squamous nodules grouped in an annular configuration, the ring being 7 cm. in diameter. At its most distal point there was a small punched-out ulcer. There was a similar, but smaller, annular lesion on the right sole and another encircling the right great toe. The patient stated that all of these eruptions had begun more or less simultaneously four to six weeks previously, and that no other manifestations had been noted. She denied sexual intercourse since her treatment 11 months ago. The rest of the physical examination was normal except for a severe gingivitis. The spinal fluid was again completely normal, and the blood gave positive tests as follows: Kolmer 1:64, Kahn 1:32, and Kline 4 plus.

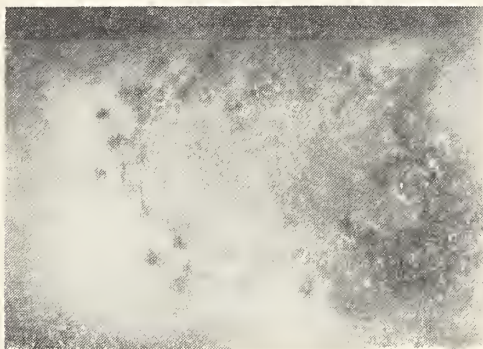


Fig. 1. Superficial Annular Ulceronodular Syphilis of the Sole of the Left Foot.

Biopsy of the left sole showed a heavy stratum corneum with several areas of marked parakeratosis, these areas overlying patches of dense infiltration with small round cells, large mononuclear cells, and a few plasma cells in the papillary and subpapillary layers. The rete mucosum was spongiotic over the infiltrate and was being invaded by it. Deeper, the infiltrate was perivascular and quite sharply defined, exhibiting in some areas a tubercloid character with epithelioid cells surrounded by small round cells and plasma cells. The vessels showed thickening of the walls and obliteration of the lumens.

Treatment was repeated using a schedule of

600,000 units of crystalline procaine penicillin G in aqueous solution daily for 10 days. All of the lesions responded well, particularly the lesion on the face which had almost completely healed at the end of 10 days.

Comment

In view of the apparent efficacy of the more recent schedules using penicillin in the rapid treatment of early syphilis, the precocious development of a late cutaneous relapse is disconcerting, especially in view of the good response during the first five months after treatment. The need for careful and prolonged follow-ups for all patients is again illustrated. It is unfortunate that it was interrupted at the crucial point, six months, in this patient.

Summary

A case is reported in which the treatment of secondary syphilis with a routine penicillin schedule was followed in less than 10 months by the precocious development of superficial late cutaneous syphilis.

MERCY HOSPITAL CLINICOPATHOLOGIC CONFERENCE

September 7, 1948

Francis C. Coleman, M.D.
Harry A. Collins, M.D.

Des Moines, Iowa

Summary of Clinical Record

A 32 year old white male was admitted to Mercy Hospital Nov. 27, 1946, with a chief complaint of fever. Three weeks before admission this patient suddenly began to have a constant fever, ranging between 100 F. in the morning to 102 F. in the afternoon. He had no pain, but lost strength rapidly. One week after the fever began a mild sore throat appeared. He remained in bed at home until admission to the hospital.

A review of systems revealed the following:

Eye, Ear, Nose and Throat: Mild sore throat with the present illness, but no nasal symptoms suggestive of a cold. No visual disturbances or headaches, and no difficulty in swallowing.

Cardiorespiratory: No cough, pain in the chest or dyspnea.

Gastro-Intestinal: Appetite good. No indigestion, nausea or vomiting. No pain in the abdomen. Bowels regular, with no change in bowel habit.

Genito-Urinary: No burning, frequency or nocturia.

Neuromuscular: Marked weakness since the onset of the present illness.

Past history of the patient was not remarkable. He had had the usual childhood diseases. The family history revealed the patient was of American extraction. His mother and father were both living and well. He had a sister who was also in good health. Social history disclosed the patient was a gateman for a railroad company. He had not been in the armed forces.

Physical examination revealed: temperature 99.8 F., pulse 140, respirations 20, blood pressure 140/100. An ecchymotic area was present on the soft palate. Several of the teeth were carious. Neither neck rigidity nor cervical lymphadenopathy was present. No rales were noted. The heart rate was rapid but regular, and no murmurs were present. The spleen and liver were palpable but not much enlarged. No axillary or inguinal lymphadenopathy was present. The external genitalia were normal. All reflexes were normal.

Laboratory studies were reported as follows: On Nov. 28, 1946, urinalysis showed specific gravity 1.019; acid reaction; albumin, negative; sugar, negative; and sediment, negative. On Nov. 29, 1946, admission hemogram revealed hemoglobin 66 per cent, red blood cells 4,200,000, white blood cells 3,900, with a differential count of 42 per cent neutrophils and 58 per cent lymphocytes. Daily white counts were done, all of which showed a leukopenia of between 3,000 and 3,500. The differential count showed between 45 and 60 per cent neutrophils. On Dec. 6, 1946, agglutinations for typhosis, paratyphosis A and B, Brucella, Proteus OX₁₉, and heterophil were all negative. On Dec. 6, 1946, a peripheral blood study was done which showed hemoglobin 70 per cent, red blood cells 3,950,000, white blood cells 3,700, with neutrophils 58 per cent, small lymphocytes 35, large lymphocytes 5, eosinophiles 1, and monocytes 1; sedimentation rate, 81 mm. fall in one hour (Westergren method); reticulocytes 0.8 per cent; malaria smears negative; bleeding time 2.5 minutes; platelets 61,000; and tourniquet test, positive. A sternal marrow aspiration was attempted. The marrow was secured with difficulty, the material obtained showing marked hypoplasia of the bone marrow, with 54 per cent lymphocytes present. Repeated blood cultures were taken, all of which were negative. A urine culture was done on Dec. 17, 1946, which was also negative. Wassermann was negative. White counts were continued and constantly showed a leukopenia of between 3,000 and 4,000.

X-ray studies included one of the skull taken on Dec. 10, 1946, which showed no evidence of bone injury or disease. There was a mottled mass

of calcified material below the tip of the twelfth rib on the right, apparently having no relation to the kidney or gallbladder. The cardiothoracic ratio was within normal limits. There was slight enlargement of the shadow of the left auricle; otherwise, the cardiac silhouette was normal. The mediastinal shadow was normal.

The patient continued to run fever after admission, which ranged between 100 F. and 103 F. The temperature was spiking in type but seldom went below 100 F. He was placed on penicillin, 30,000 units every three hours, as well as yellow bone marrow and pentnucleotide. Seven transfusions were given between December 2 and December 15. A tuberculin test was done on Dec. 5, 1946, which was negative. By Dec. 17, 1946, inguinal and axillary lymphadenopathy was present. The spleen and liver were now definitely enlarged. His appetite was good, but he lost weight rapidly, so that by the time of discharge on Dec. 24, 1946, he had lost approximately 20 pounds. After discharge he continued to run fever and became so weak he could not get out of bed. On Jan. 16, 1947, he became comatose and was readmitted to the hospital. He was given oxygen and a transfusion of 500 cc. of whole blood, but expired approximately two hours later.

Clinical Diagnosis

Leukemia, subacute type.

Dr. H. A. Collins: There are several possible diagnoses as far as I am concerned. First, we should emphasize some salient points in this history. This man was 32 years of age and had constant fever of three weeks' duration after an acute onset with sore throat and marked loss of strength. Another significant point in the history is the ecchymotic area present in the soft palate. You will notice when he entered the hospital his temperature was 99.8 F. and he had a pulse of 140. There is nothing more said about the pulse, so we do not know whether it continued to be rapid or not.

His blood studies were important because he had a 66 per cent hemoglobin and a leukopenia of 3,900. He did have 42 per cent neutrophils and 58 per cent lymphocytes. Repeated blood counts showed a persistence of the leukopenia, and the small lymphocytes were predominant. The sedimentation rate was 81 mm. in one hour. The platelet count was 61,000, which was low, and he had a positive tourniquet test. The sternal marrow puncture showed a marked hypoplasia of the bone marrow, with 54 per cent lymphocytes present. His fever was spiking in type and ranged between 100 F. and 103 F. On the first admission he did not have an enlarged spleen or liver,

and there was no lymphadenopathy; later, however, all three were present. By this time he had a weight loss of approximately 20 pounds.

I am of the opinion, from the findings, that this man probably had a leukemia, subleukemic type, because, as you know, from 30 to 50 per cent of patients with leukemia have the subleuke-



Fig. 1. Heart Showing Leukemic Infiltration of Epicardium.

mic phase. They have a persistent leukopenia with secondary anemia. The anemia may be microcytic or macrocytic. Lymphadenopathy and splenomegalia are frequently present. Unexplained fever also fits into the picture. There is frequently a hemorrhagic tendency, and the disease is fatal.

In looking back over the history you will note that he was given pentnucleotide and yellow bone marrow. I suppose these were given with the idea that he might have agranulocytosis in view of the sore throat and leukopenia. We also have to think of the possibility of a thrombocytopenic purpura, but I doubt if that diagnosis would stand up. He did have a low platelet count and a positive tourniquet test; but, in the presence of the lymphadenopathy and the splenomegalia and enlarged liver, I do not think we should give the diagnosis of thrombocytopenic purpura too much consideration.

We also have to think of aplastic anemia. The blood picture is suggestive of it, but the anemia is usually more marked and the spleen and liver

are not enlarged. A pernicious anemia I think we can pretty definitely rule out.

Hodgkin's disease also was considered. It may cause fever, pruritus, swelling of the lymph nodes



Fig. 2. Kidney Showing Leukemic Infiltration on External Surface.

(especially the cervical glands), marked secondary anemia and weight loss. This diagnosis in most instances is made by a biopsy, but there was no biopsy done. The splenomegalia, enlarged liver and generalized adenopathy do not suggest Hodgkin's disease. Therefore I am going to stand by my diagnosis of leukemia, subacute type. There is no satisfactory treatment. Death occurs within a few days or a few months. Blood transfusions are helpful but are only of temporary benefit. X-ray or roentgen ray therapy is mentioned but should be condemned, because it does not do any good and may perhaps do harm. They may have short remissions or go into a chronic stage.

Dr. F. C. Coleman: In leukemia there is characteristically a marked hyperplasia of the bone marrow, and a marrow study is usually diagnostic; however, in this patient there was hypoplasia rather than hyperplasia. That is the reason the x-rays of the skull were taken. The correct diagnosis was acute myelogenous leukemia. At autopsy the spleen weighed 870 gm. against a normal of 150 gm. The liver weighed 4,900 gm. against a normal of 1,500 gm. There was generalized lymphadenopathy and leukemic infiltration of the heart, pancreas, adrenal glands, lungs and kidneys. (See Figs. 1 to 6.)

The findings otherwise were not remarkable. The body was emaciated, and there were generalized petechial hemorrhages over the epicardium, but that was all. The cut surface of the liver had a yellowish appearance instead of the normal reddish brown appearance. Close inspection revealed discrete yellowish white areas which microscopically were leukemic infiltrations. The cut surface of the spleen showed irregular yellow areas which were also leukemic infiltrations. They represent extramedullary hemopoiesis.

The bone marrow contained moderate numbers of myeloblasts; hence we call the process an acute leukemia. There were occasional granulocytes present, which enabled us to type the leukemia as myelogenous leukemia. Portions of the bone marrow showed marked osteosclerosis. If you insert a sternal puncture needle into an area of osteosclerosis, no marrow will be obtained. That is what happened in this case. In other areas the marrow was quite cellular. After my experience with this case I think one is justified in making several attempts to secure marrow if the first one is unsuccessful. The medulla of the adrenal glands also showed diffuse leukemic infiltration. This case is particularly unusual because of the osteosclerosis present. Most cases of leukemia with osteosclerosis have an aleukemic blood picture. The white count is either normal or low, but usually low. There is a recent report on the bone changes in leukemia in which 103 cases, all children, were studied. Of these, 52 cases had skeletal changes. In 25 cases there was x-ray evidence of these changes. Nine cases had osteosclerosis such as we saw in this case. Some

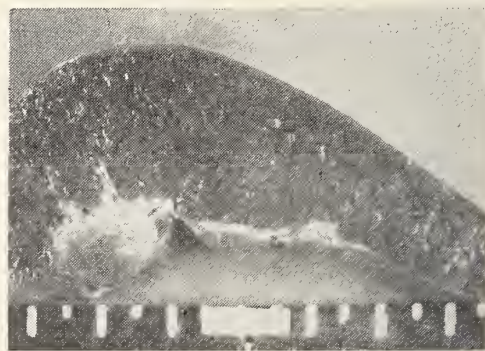


Fig. 3. Spleen Showing Leukemic Infiltrations on Cut Surface.

radiologists feel that the x-ray evidence of bony changes may be of some value in making the diagnosis of obscure leukemia. One of the diagnostic features of leukemia is pain on tapping the sternum with the finger. Bone involvement is the cause of this pain.

Certain other diseases may cause osteosclerosis.

These include Hodgkin's disease, as Dr. Collins mentioned, and polycythemia vera. Others are aplastic anemia, particularly that due to certain chemical poisoning; miliary tuberculosis; lipoid dystrophy, such as Gaucher's disease; and metas-

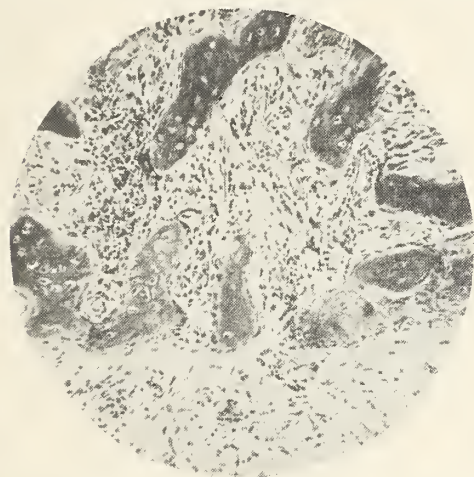


Fig. 4. Photomicrograph of Bone Marrow Showing Osteosclerosis—X 110.

tatic malignancy with a desmoplastic reaction, i. e. a malignancy where the carcinoma cells are associated with large amounts of connective tissue. Those malignancies which may produce osteo-

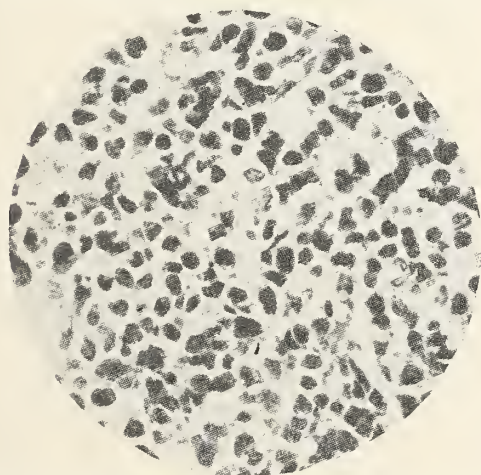


Fig. 5. Photomicrograph Showing Leukemic Cells in Bone Marrow—X 465.

sclerosis are carcinoma of the breast, lungs, prostate gland, and thyroid gland. And then, lastly, in some cases of Mediterranean anemia there are bone changes. If we do a sternal puncture and are relatively unsuccessful, or completely so, we consider one of those reasons.

Dr. Smead: Did he show signs of liver or kidney damage?

Dr. Coleman: I don't know how much liver or renal damage he had when he left the hospital.

When he first came in, he did not have much. His urinalysis was relatively normal.

Dr. Drew: Was the patient jaundiced?

Dr. Coleman: No.

Dr. Losh: What was the serum phosphatase?

Dr. Coleman: One was not done. I would imagine that his serum alkaline and acid phosphatase would be elevated.

Dr. Chambers: Would folic acid antagonists have been of value?

Dr. Coleman: I doubt it. Aminopterin has been used in acute leukemia in children. Recently I had the opportunity of seeing bone marrow studies on 4 cases before and after aminopterin therapy, all in children. It is really remarkable, the changes the bone marrow has taken in these patients. All 4 of these had marked hyperplasia of the bone marrow with replacement of

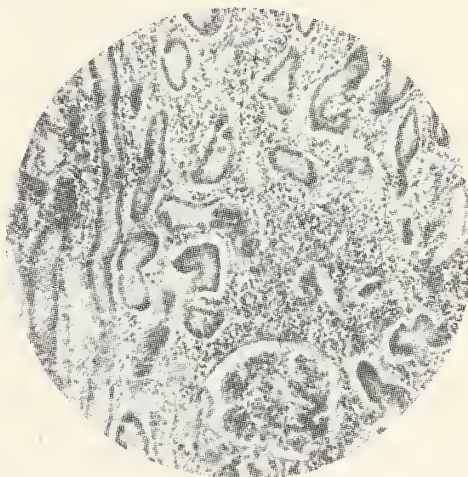


Fig. 6. Photomicrograph of Kidney Showing Leukemic Cells Between the Tubules—X 110.

the marrow with blast forms. After administration of aminopterin for a few days, the bone marrow assumed a normal pattern. I mention aminopterin not as a cure, because it has been definitely proved not to be one, but it will produce a temporary remission both in the clinical symptoms and in the blood picture. Results in adults have been discouraging.

BIBLIOGRAPHY

1. Silverman, F. N.: Skeletal lesions in leukemia. *Am. J. Roentgenol.*, 1x:819 (June) 1948.

ASSIGNMENT MEDICINE

A new film, with sound, entitled "Assignment Medicine" is offered by the U. S. Army and the U. S. Air Force, telling the story of military medicine. Photographed in actual military medical installations, the film has a running time of 32 minutes and is available in either 16 mm. or 35 mm. The shipping cost to the borrower is the postal charge (shipping weight, 6-7 pounds). Requests for the film should be directed to Major Andre, Army and Air Force Recruiting Station, 108 Federal Office Bldg., Des Moines, Iowa.

CHILD HEALTH SERVICES IN IOWA

REPORT OF THE AMERICAN ACADEMY OF PEDIATRICS'
STUDY OF CHILD HEALTH SERVICES IN IOWA

Foreword

This report of child health services in Iowa is part of a nation-wide study which has been in progress for three years under the direction of the American Academy of Pediatrics, with the cooperation of the U. S. Children's Bureau and the U. S. Public Health Service. The study was conceived in September 1944, when members of the American Pediatric Society expressed their belief that physicians should assume greater responsibility in planning for the medical care of children. A committee representing the American Academy of Pediatrics, the American Pediatric Society, and the Maternal and Child Health Advisory Committee of the U. S. Children's Bureau, prepared a report, which was unanimously accepted by the members of the Academy at their meeting in November 1944¹, thus committing them to the following objective: *"To make available to all mothers and children of the United States all essential preventive, diagnostic and curative medical services of high quality which, used in cooperation with other services for children, will make this country an ideal place for children to grow into responsible citizens."*

At the outset it was realized that data needed for planning were incomplete, scattered, and in some fields totally lacking. Hence, the Academy undertook a nation-wide study to determine existing facilities and services for medical and health care of children.

The aim, scope and plan of the study were presented to the Iowa Pediatric Society April 18, 1946, by Ward L. Chadwick, M.D., of Denver, Colo., regional director of the study of child health services. The Iowa Pediatric Society pledged full cooperation and assistance. The same day the House of Delegates of the Iowa State Medical Society voted approval of the study in Iowa.

An advisory committee was set up and met early in May 1946. The purpose and plan of the survey were explained to these representative officers of organizations in the state interested in child care by the state chairman of the Academy of Pediatrics. The following organizations and individuals promised their assistance in making the survey a success:

Walter L. Bierring, M.D., State Commissioner of Public Health
John M. Hayek, M.D., State Board of Health

IOWA STUDY OF CHILD HEALTH SERVICES

American Academy of Pediatrics

State Chairman.....James E. Dyson, M.D.
Executive Secretary.....Perry P. Amick, M.D.

American Academy of Pediatrics Nation-Wide
Study of Child Health Services

Made with the cooperation of the U. S. Children's Bureau
and the U. S. Public Health Service
Committee for the Study

Warren R. Sisson, M.D., Chairman
Allan M. Butler, M.D. Joseph I. Linde, M.D.
Harvey F. Garrison, M.D. Arthur H. London, Jr., M.D.
Henry F. Hemholz, M.D. Joseph S. Wall, M.D.
Lee Forrest Hill, M.D. James L. Wilson, M.D.

John P. Hubbard, M.D., Director
Advisory Committee
Joseph S. Wall, M.D., American Academy of Pediatrics
Martha M. Eliot, M.D., U. S. Children's Bureau
George St. J. Perrott, U. S. Public Health Service

Robert L. Parker, M.D., President, Iowa State Medical Society
Joseph B. Kennedy, M.D., President, Iowa State Dental Society
Olin E. Hoffman, D.D.S., Executive Secretary, Iowa State Dental Society

Channing G. Smith, M.D., Medical Advisor, State Board of Social Welfare

Paul Hansen, President, Iowa Hospital Association

John V. McCarthy, State Representative, National Foundation for Infantile Paralysis

C. W. Kammeier, Executive Secretary, Iowa Tuberculosis and Health Association

Miss Ade'ine Hendrix, Executive Secretary, State Association for Registered Nursing

Mr. R. J. Laird, State Adjutant, American Legion

Mrs. M. Myrton Skelly, Executive Secretary, American Legion Auxiliary

Judge F. H. Cooney, Chairman, Child Welfare Division, American Legion

Mrs. Dorothy Phillips, Executive Secretary, Iowa Society for Crippled Children and Adults

Mrs. A. L. Bunce, President-Elect, American Association of University Women

Mrs. Raymond Sayer, President, Extension Department, Iowa Farm Bureau Federation

Mrs. W. R. Hornaday, Co-Chairman, Child Welfare Division, Federation of Women's Clubs

Rev. F. T. Zuch, Director of Catholic Charities

Mrs. L. S. Mumford, President, Iowa Congress of P.-T.A.

Miss Lillian Edmunds, Executive Secretary, Negro Community Centers

Mr. A. H. Blank, State Chairman of the Movie March of Dimes

Miss Marie Neuschaefer, R.N., Director of State Department of Nursing

Mr. George Westby, Director, Lutheran Welfare

Mrs. Thornburg Cowles, Des Moines

Dr. Perry Amick was appointed executive secretary to conduct the study. Office space was furnished by the state office of John V. McCarthy of the National Foundation for Infantile Paralysis. Financial support of the study was shared equally by the Iowa chapters of the National Foundation for Infantile Paralysis and the Maternal and Child Health Division of the State Board of Health.

James E. Dyson, M.D.,
State Chairman

Introduction

This fact-finding study was set up to collect data on facilities and services currently available for the health and medical care of children within the state of Iowa. The sources of this information were (1) physicians and dentists in private practice, (2) voluntary and official community health agencies serving children, and (3) all hospitals admitting children or maternity cases².

Corresponding to these three categories of information, 18 different schedules were prepared by the central staff of the study. Some of the schedules were designed as mail questionnaires. Others, requiring a field visit, were completed through personal visits by the executive secretary, field staff and the pediatricians themselves. At the outset the regional secretary explained the method of conduct-

²In order to produce a report brief enough for practical use in the state, a large mass of data collected in the course of the study has necessarily been referred to only briefly or omitted entirely. Fuller details are available on application to the state chairman of the Academy. The national report of the study has covered broad aspects of the data which cannot be adequately covered for a single state because of small numbers; see *Child Health Services and Pediatric Education*, The Commonwealth Fund, New York, 1949.

ing the study to the members of the Pediatric Society and each one's share in it. This was in accordance with the original policy, which was based on the premise that those who are active in rendering child care should share not only in the future planning but also in the collection of the data required to establish a sound basis for the improvement of child health services. Each member of the Society was therefore asked to fill out his own schedule accurately and completely, to assist in obtaining information from hospitals, to cooperate with the local health officers in collecting the data related to community health services, and to contact general practitioners and specialists in his vicinity in order to assure a maximum response. The participation of the medical profession, particularly those recognized within their own communities as specialists in child care, can be considered largely responsible for the gratifying response to the questionnaires.

The record of physicians' visits was obtained for a single day that was assigned to him in advance; one seventh of the physicians reported for each of the days in the week. Correction was made for the

It is to be emphasized that most of the data obtained, especially those which can be expressed in terms of rates per 1,000 children, are measures of quantity of service rather than quality. Since deficiencies in amount of service are likely to be associated with a lower quality of care, the comparisons in this report tend to underestimate the real disparities.

Comparisons Within Iowa

One of the primary purposes of the study has been to determine the distribution of health and medical services for children in order that existing inequalities in Iowa might be defined in specific



Fig. 1.

season in which the study was conducted. For non-reporting physicians adjustment was made on the basis of a special study in four states; hence, unless otherwise indicated, the figures represent services for all practitioners in the state or specified area. The records for pediatricians covered 28 days. Schedules for community health services and hospitals covered one year.

Because of the absence of any adequate population data for the year of the study, special estimates of child population³ as of July 1, 1945, were made for each county.⁴

³In this report *children*, unless otherwise qualified, refers to persons under 15 years of age, including newborn and premature infants.

⁴Population under 5 years of age was estimated on the basis of the number of births for each of the five calendar years, 1940 through 1944. Survival rates for each year of age were applied to the number of births occurring in each of the years, and adjustment was made for underregistration of births. The number of children aged 5 to 14 years was estimated for each county on the basis of changes in school enrollment. The ratio of elementary public day school enrollment for 1945 to that for 1940 was used to project to 1945 the 1940 census population in the age group 5 to 14 for each county. In both cases the figures were adjusted to total to the estimated population of the entire United States for the specific age group for July 1, 1945.

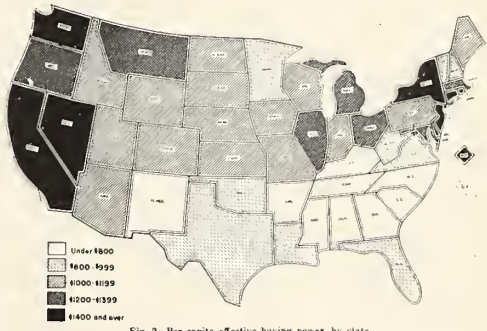


Fig. 2. Per capita effective buying power, by state.

Fig. 2.

terms. Hence counties have been grouped to bring out contrasts between densely populated urban centers and isolated counties. The usual classification of urban and rural is not satisfactory, since people cross county lines to obtain medical care in nearby centers. Counties have therefore been grouped together on the basis of two fundamental characteristics: (1) population density, and (2) proximity to densely populated areas. In this way, separate consideration is given to counties which, although they themselves may be sparsely populated, are nevertheless relatively close to metropolitan counties and the medical facilities available there. Under this classification *metropolitan counties* are those which include the metropolitan districts of cities 50,000 or more in population. Counties which are geographically contiguous to any of the metropolitan counties are classified as *adjacent*. Counties that do not touch any part of a metropolitan county have been termed *isolated* and subdivided into those with an incorporated place of 2,500 or more population (*semirural*) and those without such a place (*rural*)⁵.

Chapter I.—THE ECONOMIC AND HEALTH SETTING OF THE CHILD

The financial capacity of Iowa as compared with other states is fair. The income of \$1,060 per person

⁵For a more detailed description of the classification by county group, see Hubbard, J. P.; Pennell, M. Y.; and Britten, R. H.: Health services for the rural child—availability of hospitals, physicians, and dentists in service areas. J.A.M.A., cxxxvii: 337-343 (May 22) 1948. See Fig. 1.

is the twenty-fourth in the United States⁶. Fig. 2 shows that Iowa is one of the near average income states, the United States average being \$1,141.

It is interesting to compare Iowa in per capita income with the highest, lowest and neighboring states.

State	Income
Connecticut (<i>highest</i>)	\$1,579
Illinois	1,356
Wisconsin	1,126
Nebraska	1,067
Iowa	1,060
Missouri	1,026
South Dakota	1,023
Minnesota	977
Mississippi (<i>lowest</i>)	559

Child Population

In Iowa 24.6 per cent of the population are children under 15 years of age. Comparison with the highest, lowest and neighboring states shows the following data for 1940:

New Mexico (<i>highest</i>)	34.5%
South Dakota	27.8
Nebraska	25.2
Wisconsin	24.9
Minnesota	24.7
Iowa	24.6
Missouri	23.4
Illinois	21.6
California (<i>lowest</i>)	19.8

According to the study estimate as of July 1, 1945, there were 646,927 children in Iowa under 15 years of age. Of these, 24 per cent live in the six metropolitan counties, 26 per cent in the 30 adjacent counties, 39 per cent in the 44 isolated semirural counties, and 11 per cent in the 19 isolated rural counties.

Death Rate

The state's death rate during 1940⁷ was the third lowest of all the states, 8.6 per 1,000. This is a good showing, bettered only by South Dakota and Nebraska.

Infant Mortality

The average infant mortality was 33.5 per 1,000 live births in the entire state of Iowa (1941-45). Broken down by sections, the infant mortality per 1,000 live births was:

Metropolitan counties	33.4
Adjacent	32.0
Isolated semirural	34.8
Isolated rural	32.1

In comparison with the highest, lowest and adjoining states, the survey on infant mortality showed per 1,000 live births:

⁶Calculated from estimates of income made by Sales Management for 1944-46: Sales Management LIV (May 15) 1945, and corresponding issues 1946 and 1947.

⁷The rates were adjusted to the age composition of the entire country. Data for 1940 were used since that is the last year for which population data by age are available. National office of Vital Statistics, U. S. Public Health Service. Special Reports, Selected Studies xxiii (June 26) 1945.

Connecticut (<i>lowest</i>)	30.0
Minnesota	31.4
Illinois	32.9
Nebraska	33.0
Wisconsin	33.0
Iowa	33.5
South Dakota	36.2
Missouri	40.1
New Mexico (<i>highest</i>)	95.3

This infant mortality had been reduced in Iowa in 1945 to 30.3 and in 1946 to 29.9 per 1,000 live births.

Although the nonwhite population is not large in numbers, in 1945 the nonwhite infant mortality was 62.9 as compared to 30.1 per 1,000 in the white population. The high nonwhite infant mortality is partly, if not entirely, due to the increased proportion of premature births in the nonwhite population.

Hospital Births

During 1945 88.8 per cent of births occurred in hospitals, which is well above the average of 78.8 per cent for the United States. In Iowa's metropolitan and adjacent counties the per cent born in hospitals was 90.5 and in isolated counties, 86.9. Of the nonwhite children 88.3 per cent were born in hospitals in comparison with 88.8 per cent of the white babies. The percentage of births in hospitals has been increasing from year to year, from 35.6 per cent in 1935 to 88.8 per cent in 1945 and 92.2 per cent in 1946; it can be expected that this trend will continue.

Chapter II.—TOTAL VOLUME OF CHILD HEALTH SERVICES

Medical Care

Although no yardstick of the amount of care which children need is available at present, it has seemed profitable to examine the amount of care they are now receiving. A composite picture of the total volume of medical care rendered to children on one day has been obtained by adding together the medical care (expressed as visits or hospital days⁸) rendered to children (1) in private practice (office and home), (2) in clinics and conferences⁹, and (3) in hospitals¹⁰. This summation represents the total number of children under medical care on one day and, when related to the child population, gives a useful index of the total volume of medical care.

The primary purpose of a quantitative estimate of this type is to provide a means of making comparisons among states and between areas of differing population, geographic and socio-economic characteristics. The areas in which children receive the greatest amount of care are not necessarily getting enough nor is the quality necessarily high. We have no standard which represents adequacy. These better

⁸Since, for this purpose, equal weight is given to a physician's visit, a clinic visit and a day of hospital care, it may be felt that the importance of hospital care has been underestimated in the figures for total volume.

⁹Outpatient departments, well child conferences, mental hygiene clinics, and community health services for crippled children.

¹⁰Days of care in institutions for the feeble-minded are excluded.

supplied areas, however, do serve as a basis for comparison.

Children under medical care per day per 1,000 in Iowa as compared to the entire United States average, and the highest, lowest and adjoining states:

State	Total	Private Practice*	Hospital	Clinic
U. S. Average	13.8	10.7	2.7	0.4
Nevada (<i>highest</i>)	22.9	16.9	3.8	2.2
Nebraska	16.2	12.9	3.2	0.1
Wisconsin	16.0	12.6	3.1	0.3
Illinois	15.9	12.1	3.2	0.6
Iowa	15.2	12.2	2.9	0.1
Minnesota	13.9	10.0	3.7	0.2
South Dakota	12.3	8.7	3.3	0.3
Missouri	12.2	9.5	2.3	0.4
Mississippi (<i>lowest</i>) ...	7.7	6.5	1.1	0.1

*Home and office

Because Iowa has paved roads connecting all counties and adjacent metropolitan medical centers, the isolated counties had nearly an equal proportion of children under medical care as did the metropolitan counties:

Metropolitan counties	15.6
Isolated counties	14.6

What part of the total volume of medical care received by Iowa children is for health supervision? Health supervision is made of two elements: visits to child health conferences and visits to physicians' offices.¹¹ Of the total number of children under medical care (exclusive of newborn) more than one-fifth (23 per cent) are under care for health supervision. More detailed descriptions of health supervision are given in following chapters. Nearly all the children under health supervision in Iowa were seen by physicians in their offices.

The number of children, other than newborn, receiving health supervision, exclusive of school health services, on an average day per 1,000 children in Iowa was:

	Well Child Conferences	By Private Practitioners	Total
Whole state	0.029	2.84	2.86
Metropolitan and adjacent counties	0.056	3.16	3.21
Isolated	0.003	2.52	2.52

Dental Care

Out of every 1,000 children 3.6 were under dental care on one day in Iowa. There was a wide difference in the level of such care in the country, ranging from a rate of 7.2 in the state with the highest value to 0.9 in the one with the lowest.

Children under dental care per 1,000 per day^a.

State	Total	Private Practice	Clinics
U. S. Average	3.3	3.2	0.1
Massachusetts (<i>highest</i>) ...	7.2	6.5	0.7
Illinois	5.3	5.2	0.1
Minnesota	5.1	5.0	0.1
Nebraska	3.9	3.9	0.0 ^b
Iowa	3.6	3.6	0.0 ^b
South Dakota	3.0	3.0	0.0
Missouri	2.9	2.8	0.1
New Mexico (<i>lowest</i>)	0.0	0.9	0.9 ^b

^aWisconsin data incomplete

^bLess than 0.05

¹¹Hospital care, a part of total volume, was excluded from well child care.

In the metropolitan and adjacent counties there were 3.1 seen by general practitioners of dentistry per day per 1,000 and in isolated rural counties 3.4 children.

There were twice as many children visiting pedodontists and orthodontists in metropolitan and adjacent counties; the rates were 0.36 and 0.17 per day per 1,000 children, respectively.

Summary

1. The number of children under the medical care of private practitioners in Iowa is equal to the adjoining states.

2. The rural areas receive nearly as much medical care for their children as do the urban areas.

3. One fifth of the medical care of children was for health supervision.

4. The proportion of children under dental care in Iowa is about average of that of the adjoining states, but only one half of that of the highest state.

5. More children from the rural counties were visiting the dentist than those from metropolitan counties. In Iowa there are 1,616 persons per dentist. Of this number 442 are children under 15 years of age.

Chapter III.—HEALTH SUPERVISION

Within recent years the concept of continuing health supervision for well children has become accepted. Pediatricians receive training regarding normal growth and development, the feeding and care of well children, and the handling of the usual problems of social and emotional adjustment. General practitioners have assumed considerable responsibility in health supervision of children in their own private practice. Also, a fact of equal or perhaps greater importance, mothers themselves have become accustomed to looking to their physicians, whether pediatricians or general practitioners, for guidance in the preservation of their children's health.

The bulk of the child health supervision by private physicians in Iowa is carried out by general practitioners. Of the private physicians' visits for health supervision of children 90.4 per cent were made by general practitioners, 7.3 per cent by pediatricians, and 2.3 per cent by other specialists. Of the general practitioners' visits to children 30 per cent are for health supervision; this proportion for the pediatrician is 42 per cent.

Not all the continuing health supervision of children is given in the offices of private physicians. For a number of years public and private agencies have conducted child health conferences where infants and young children can receive health supervision by a physician at the community health center. In the following discussion this type of service has been combined with the health supervision given by the physician in his private practice. Since children attending well child conferences usually range in age from one month to six years, the

following comparisons are limited to these ages.¹²

The number of these children under health supervision on one day in Iowa is about 6 per 1,000 children under five years of age. The differences in amount of health supervision as between county groups is indicated in the following figures:

	No. of Children per 1,000 under 5 yrs. under Health Supervision in Iowa on 1 Day
Whole state	6.00
Metropolitan counties	6.17
Adjacent	6.88
Isolated semirural	6.22
Isolated rural	2.64

Comparison with other states

	No. of Children per 1,000 under 5 yrs. under Health Supervision on 1 Day.
U. S. Average	5.5
New York (<i>highest</i>)	10.7
Wisconsin	6.8
Illinois	6.7
Iowa	6.0
Nebraska	5.8
Minnesota	5.6
Missouri	4.4
South Dakota	3.4
Mississippi (<i>lowest</i>)	1.9

Other than newborn 23.4 per cent of the medical care of children in Iowa was for health supervision.

Summary

1. The bulk of the child health supervision by private physicians is carried by general practitioners.

2. Thirty per cent of the general practitioners' child visits in private practice and 42 per cent of the pediatricians' visits are for health supervision.

3. The rate of children under five years of age under health supervision (in private practice or clinics) on one day is about average of that in the adjoining states.

4. The amount of health supervision was relatively much less in isolated rural than in metropolitan and adjacent counties.

Chapter IV.—PRIVATE PRACTICE

Physicians

Number, Type and Training.—In July, 1946,¹³ there were 1,979 physicians in private practice in Iowa. Of these 1,501 were general practitioners and 478 were pediatricians and other specialists.

Age Groups	General Practitioners	Specialists	Total
Under 35	155	48	203
35 to 44	345	134	479
45 to 54	241	118	359
55 to 64	307	104	411
65 and over	445	74	519
Not reported	8	0	8
Sex			
Male, white	1,452	454	1,916
Male, nonwhite	11	1	12
Female, white	38	13	51
Female, nonwhite	0	0	0

¹²The estimated population under 5 years of age, 240,654, is used in calculating the rates.

¹³It is realized that at the present time (February 1949) the number of physicians in private practice is greater than at the time the study was made, but no estimate of the increase is possible. It is also to be noted that the number of physicians under 45 is greatly increased by the return of these ages from military services.

A total of 955 general practitioners and 338 specialists filled out schedules reporting child visits on a day.

General practitioners were asked to report on their hospital training. The data adjusted to the age distribution of the total number of general practitioners are given below for Iowa compared with the United States:

	Iowa	United States
None or less than one year of hospital training	29.7%	20.7%
One year or more of hospital training:		
None or less than one month in pediatrics	25.4	27.2
One month or more in pediatrics	44.9	52.1

The younger physicians had more training as would be expected. The following data apply to Iowa:

	Under 45 years	45-64 years	65 or more years
None or less than one year of hospital training	7.9%	23.2%	62.7%
One year or more of hospital training:			
None or less than one month in pediatrics	17.7	31.2	27.2
One month or more in pediatrics	74.4	45.6	10.1

At the time of the study there were 327 children per physician in private practice in Iowa. This ratio as compared with other states shows the best was 143 children per physician in New York.

Ratio of Children per Physician in Iowa Compared to the Adjacent States.

Illinois	219
Nebraska	273
Minnesota	312
Missouri	314
Iowa	327
Wisconsin	340
South Dakota	529

The average for the United States was 308. The ratio of the number of children per physician, rather than the total population per physician, has been used to indicate relative accessibility of physicians to children.

The following data shows the availability of physicians in private practice by county groups in Iowa:

		General		
No. of Physicians	Total	Prac- titioners	Pedia- tritions	Other Specialists
Whole State	1,979	1,501	22	456
Metropolitan counties	591	344	15	232
Adjacent	489	416	2	71
Isolated semirural	733	579	5	149
Isolated rural	166	162	0	4
No. of physicians per 1,000 children				
Whole state	3.06	2.32	0.034	0.70
Metropolitan counties	3.75	2.18	0.095	1.47
Adjacent	2.94	2.50	0.012	0.43
Isolated semirural	2.88	2.28	0.020	0.59
Isolated rural	2.42	2.36	0.000	0.06

The number of physicians in each county, classified as to type of practice, is available but not included in this report.

Pediatricians.—There were 22 physicians in Iowa who reported that they limited their practice to children and thus were accordingly classified as pediatricians, giving a ratio of about 30,000 children per pediatrician. Of the 22 pediatricians in Iowa 12 had been certified by the American Board of Pediatrics as of July 1947.

The number of children per pediatrician and number of pediatricians in Iowa, and the lowest, highest and adjacent states are as follows:

State	Children per Pediatrician	No. of Pediatricians
New York (<i>highest</i>)	4,180	677
Illinois	7,570	241
Minnesota	12,250	58
Missouri	12,850	75
Nebraska	16,900	19
Wisconsin	17,300	46
Iowa	29,400	22
South Dakota	34,350	5
Arkansas (<i>lowest</i>)	73,000	8

Other Specialists.—The 456 specialists other than pediatricians were divided into eight groups as follows:

	Total No.	No. Certified by American Specialty Boards
Internal medicine and allied specialties	80	26
Allergy	2	0
Psychiatry and Neurology	17	7
Surgery, except orthopedic	127	18
Orthopedic surgery	17	11
Obstetrics and Gynecology	30	7
Ophthalmology and Otolaryngology	156	58
Radiology and Anesthesiology	27	14

Summary

The general practitioners of medicine and dentistry are available to the child population of the entire state, both rural and urban. As Iowa is a plains state and has no mountain or water barriers to transportation of patients to doctors, the population uses the paved highways to obtain prompt medical service. The formal training of these physicians in child care both for medical service and health supervision was reported as being rather limited in a large proportion. Pediatrics as a specialty is a recent addition to the curriculum of the medical schools. Medical education, another section of this study, conducted on a national basis, has been made by the National Committee of the Academy and is not included in this report. It is desirable to bring child care instruction to the general practitioners throughout the state by an extension service of the State University College of Medicine.

Physicians' Services

In Chapter II, dealing with the total volume of medical care, the counties were necessarily combined into two groups. For comparisons of private practice the four county groups may be considered sep-

arately. The amount of such care received by children living in the isolated rural counties of Iowa is 75 per cent as great as that received in the metropolitan counties of the state, according to the reports of visits per day of the physicians living and practicing in the various county groups.

Physicians' Visits per 1,000 Children on One Day.

	Office, Home & Sick Child		
	Hospital	Visits	Well Child
Whole state	15.93	11.39	4.54
Metropolitan	16.43	11.82	4.62
Adjacent	15.84	10.74	5.10
Isolated semirural	16.70	11.99	4.71
Isolated rural	12.10	9.71	2.39

Proportion of Care Rendered by General Practitioners and Specialists.—Most of the private physicians' care received by children in Iowa is provided by the general practitioner (85 per cent). In the metropolitan counties, however, the proportion falls to 66.5 per cent because of the large amount of service given by pediatricians and other specialists.

Per Cent of Visits by Type of Practitioner

	General Practitioner	Pediatrician	Other Specialists
Whole state	85.1%	4.9%	10.0%
Metropolitan	66.5	13.9	19.6
Adjacent	92.5	0.9	6.6
Semirural	89.5	2.9	7.6
Isolated rural	96.9	0.0	3.1

As most of the pediatricians and other specialists reside in metropolitan counties, the other counties do not have reports of many such visits. The pediatricians and other specialists serve children from other than metropolitan counties.

Number of Visits Per Day.—During the summer months of 1946, covered by the study, 13 per cent of the general practitioners reported between 30 and 40 visits on the day of report.¹⁴

Per Cent of General Practitioners Reporting Specified Number of Visits.

No. of Visits on 1 Day	Persons of	
	All Ages	Children Under 15 Yrs.
None	17%	22%
1-9	18	57
10-19	22	17
20-29	17	3
30-39	13	1
40-49	6	*
50-59	4	0
60 and over	3	0

* less than .05

When the data have been adjusted for seasons and for nonreporting physicians, general practitioners in Iowa averaged 18.8 per cent a day.

Visits per General Practitioner per Calendar Day in Iowa and Adjacent States.

	Child Visits	Total Visits
Illinois	3.8	12.4
Nebraska	5.2	15.2
Missouri	4.5	17.2
Minnesota	5.3	18.4
Iowa	5.8	18.8
Wisconsin	6.6	20.0
South Dakota	7.5	21.8
U. S. Average	4.8	16.4

¹⁴Sundays, holidays and days off were included in making this average.

The average number of pediatricians' visits on one day was 23.3.

Location of Child Visits.—The proportion of office, home and hospital visits is as follows:

	General Practitioner	Pediatrician	Other Specialists
Office	67%	54%	64%
Home	12	9	2
Hospital	21	37	34

For all physicians combined 66 per cent of the children made office visits, 11 per cent were home visits, and 23 per cent were seen in hospitals.

Dentists

Number, Type and Training.—At the time of the study (summer of 1946) there were 1,465 dentists in private practice in Iowa. Eighteen dentists reported that they specialized in orthodontia, none in pedodontia. For the state as a whole there was a ratio of 442 children per dentist. This ratio of number of children per dentist is compared with corresponding figures for the highest, lowest and adjacent states:

New York (<i>highest</i>)	273
Illinois	338
Minnesota	390
Nebraska	417
Iowa	442
Missouri	472
South Dakota	682
South Carolina (<i>lowest</i>)	2,155
U. S. Average*	548

*Exclusive of New Jersey and Wisconsin

The number of dentists per 1,000 children by county groups was:

	General Practitioners	Orthodontists and Pedodontists	Other Specialists
Whole state	2.26	2.19	0.028
Metropolitan	2.79	2.61	0.076
Adjacent	2.05	1.99	0.006
Semirural	2.29	2.25	0.020
Isolated	1.50	1.48	0.000

The availability of dentists as to numbers in general practice, pedodontia, orthodontia and other specialties by county groups was:

	General Practitioners	Orthodontists and Pedodontists	Other Specialists
Whole state	1,465	1,418	18
Metropolitan	440	411	12
Adjacent	341	332	1
Semirural	581	573	5
Isolated	103	102	0

Age, Sex, Race, Training.—Only 10 of the 1,465 dentists in private practice in Iowa in the summer of 1946 were females; 4 were nonwhite.

Of 571 dental general practitioners who reported, 544 had not received any postgraduate training in pedodontics. Eleven had less than one month, and only 16 had one month or more.

Age	General Practitioners	Specialists	Total
Under 35	142	3	145
35 to 44	278	13	291
45 to 54	407	13	420
55 to 64	288	8	296
65 or over	209	9	218
Not reported	94	1	95
	1,418	47	1,465

Office Assistants.—Of 838 dentists who reported the number of their office assistants 548 had one and 96 had two or more. Twenty-seven reported they had dental hygienists in their offices.

Dentists' Services

The rate of visits for dental care on one day has been given in Chapter II in comparison with the other selected states and for two broad county groups. The number of visits per 1,000 children on one day for each of the two county groups is:

Metropolitan and adjacent	3.10
Semirural and isolated	3.35

Nearly all—882 out of 905 reporting—cared for children for services other than extractions or emergency. A group of 704 dentists reported on the number of services for children, giving a ratio of 4.3 fillings to 1 extraction.

One fourth of the dentists reported 10 or more patients on the day of report during the summer of 1946.

Number of visits on one day

	Persons of All Ages	Children Under 15 Years
No Patients	22%	42%
1-4	11	51
5-9	39	6
10-14	21	—
15-19	5	1
20 or more	2	—

When the data had been adjusted for season and projected to 100 per cent coverage, the average number of visits per day was 6.3, of which 1.6 were children.

Only 27 dentists out of 698 reported that they did any preschool or school dental services during the preceding month. (It must be remembered that the study went on during the summer.) The number of hours average three and one-half per week for those participating. Twenty-one reported participating in other dental activities, such as teaching, outpatient clinics, and institutional work, at six and one-half hours per week per participant.

Chapter V.—COMMUNITY HEALTH SERVICES

During the past 25 years a variety of child health services has grown up in local communities. For the purposes of this study a selection was made of the types which either have been accepted or are being increasingly recognized as community responsibilities. This list by no means covers all desirable services but offers a fair measure of community activity for child health.

Although the administering authority is the public agency, the medical care is often rendered by local practicing physicians. Below is shown the amount of time per month spent by general practitioners and pediatricians in school health services, child health conferences, and other medical activities aside from private practice.

Staff engaged in School Health Services
in Public Elementary Schools

County Groups	Health Officers	School Physicians	School Nurses
Metropolitan	2	8	71
Adjacent	1	9	28
Isolated semirural	4	13	46
Isolated rural	0	6	3

All but three of the 36 school physicians are general practitioners. Only one is a pediatrician.

Seventy-five of the 99 counties are without medical service in at least one public elementary school, and 38 counties have neither medical nor nursing services. In the counties without medical service in any public elementary schools live 63.4 per cent of the children age 5 to 14 years. In the counties that lack both medical and nursing service live 23.3 per cent of the children of the same age group.

Well Child Conferences.—The number of well child conferences in one year for infants and preschool was 616. Of these, 72 were for infants only. Fifty-two of these 616 sessions were of an official agency, and 564 were by voluntary agency. A total of 7,132 visits was made by 1,861 infants and preschool children.

Well Child Conference Patients and Visits Per Year
Per 1,000 Children Under 5 yrs. of Age
in Iowa and Other States.

	Patients	Visits
Illinois	65	339
Minnesota	43	107
Wisconsin	41	173
Missouri	40	123
Nebraska	23	44
Iowa	8	30
South Dakota	6	9
United States	62	182

Part time paid pediatricians conducted 48 official agency sessions and 42 voluntary sessions; part time general practitioners conducted 153 sessions for voluntary agencies. The average pay per session for both groups was \$5.00. The balance of the sessions were conducted by full time paid physicians and hospital house staffs.

Services given to these infants were small pox vaccinations, whooping cough and diphtheria inoculations (at 90 per cent of the sessions), advice to mothers (at 32 per cent of the sessions), consultant service by a nutritionist (at 83 per cent of the sessions), and public health nursing follow-up in the home (all sessions). There was a total of:

4,115.....	Small pox vaccinations
6,482.....	Diphtheria inoculations
411.....	Whooping cough inoculations

No agency reported the availability of consultant service by a psychologist or psychiatrist.

Dental Clinic Visits During One Year.—Dental clinics were conducted during 7,477 hours, of which 5,472 were by an official agency and 1,975 by a voluntary agency. A total of 10,985 visits were made by 4,746 patients. Of these, 402 were preschool, 3,145 were school children, and 1,199 were not reported separately.

There were 2,160 extractions, 8,639 fillings, 1,434 prophylaxis treatments, and 200 orthodontic visits given the 4,106 patients in clinics reporting type of service. Thus the patients average 3 services, and there were 4 fillings to 1 extraction. The Dental College of the State University at Iowa City does considerable orthodontia and operative work for children.

Mental Hygiene Services for Children During One Year in Iowa.—Mental hygiene services were obtained by 503 children in 1,405 visits. There were 307 days of clinic service, corresponding to 1,197 visits. All the clinics were by voluntary agencies and conducted in metropolitan and adjacent counties. Only 15 per cent of the visits were to clinics with a full time psychiatrist on the staff.

Services for Physically Handicapped Children During One Year.—In one year 69 sessions were held by official agencies; none by voluntary agencies. A total of 1,620 visits were made by 1,568 patients. These clinics were staffed by a pediatrician, nurses, and physiotherapist or social workers, employed full or part time.

Smouse Opportunity School, in Des Moines, is a part of the public school system. There are 155 enrolled, of which 44 are crippled, 19 postpoliomyelitis, 9 spastic, and 16 miscellaneous. There are 44 cardiac, crippled from rheumatic fever. Eleven are totally deaf, 6 hard of hearing, and 16 in sight-saving classes. These children receive physiotherapy, special diets and rest periods, besides their class work.

Public Health Nursing services have long been considered an essential element of a community health program. However, during the study year, 57 counties reported no public health nursing services.

Public health authorities usually consider that for a successful and adequate program there should be one nurse per 2,000 population or about one nurse to 500 children. The child population per full time nurse in Iowa by county group is given below:

Services for Children Provided by Official and Voluntary Public Health Nursing Agencies During One Year
by County Groups in Iowa.

	No. of Full Time Nurses	Nurses Per 1,000 Children	No. of Home Visits Per 1,000 Children
Total	135	0.209	77.7
Metropolitan	67	0.425	170.9
Adjacent	13	0.078	40.1
Semirural	50	0.197	60.9
Isolated rural	5	0.073	17.3

Public Health Nursing Service in Iowa As Compared
to Adjacent States.

	Full Time Public Health Nurses per 1,000 Children	Child Home Nursing Visits per 1,000 Children
Wisconsin	0.50	317
Illinois	0.38	363
Minnesota	6.38	119
Missouri	0.26	99
Iowa	0.21	78
Nebraska	0.18	98
South Dakota	0.15	61
U. S. Average	0.40	210

Chapter VI.—HOSPITAL¹⁵ FACILITIES AND SERVICES

General Hospitals

The general hospital, at its best, serves not only as a place where the sick may be given inpatient care but also as a health center for the entire community with outpatient services, public health clinics, health education, and training for physicians and nurses. It has become a complicated and expensive instrument, but, without access to a good general hospital, no community is adequately equipped to fight against ill health.

Facilities and Services for Children (Other than Newborn)

There are 147 general¹⁶ hospitals in Iowa caring for children that are reporting in this survey; 31 of these have pediatric units.¹⁷ Sixty-one of the hospitals are 5 to 24 beds, and 59 are between 25 and 100 beds in size. Only 4 have as many as 250 beds. For county distribution of hospitals see Fig. 1.

The general hospitals included in this study have 8,415 total beds, or 13 per 1,000 children. In these hospitals 847 beds are set aside for the exclusive use of children, 10 per cent of all beds in the state, or 1.3 per 1,000 children.

In the following table, these data are compared with the adjacent states:

	Hospital Beds per 1,000 Children	
	Total	Pediatric Beds
Minnesota	17.0	1.11
Illinois	16.1	1.74
South Dakota	15.1	1.69
Wisconsin	14.5	1.28
Nebraska	14.5	.86
Missouri	13.8	1.21
Iowa	13.0	1.31
U. S. Average	12.8	1.20

Admissions of children to general hospitals in Iowa totalled 41,888 during the year of study, giving an annual rate of 65 per 1,000 children. The rates by county group in Iowa were 82 in metropolitan and adjacent counties and 47 in isolated counties.

The majority of the admissions of children were to hospitals with 100 or more beds, and 26 per cent to those with 25 to 99 beds. Only 8 per cent were to hospitals having less than 25 beds.

Newborn Care

In the 147 general hospitals in Iowa reporting in the study, there was a total of 8,415 beds, 2,038 bassinets and 200 incubators—not reported for 16 hospitals.¹⁸ There were 45,923 births in these hospitals during the year of the study (1946); 92.2 per cent of all live births occurred in the hospital that same year. The average hospital stay was 8.2 days.

Characteristics of Hospitals Caring for Children

Quality of medical or hospital care is difficult to measure. An effort was made in the study, however, to obtain answers to certain objective questions

which provide a few indications of the quality of care provided in hospitals. The items include space, organization of the pediatric service, medical staff, nursing, special services, and certain accepted pediatric practices. These characteristics are related to the amount of services provided in the hospitals having them.

The proportion of children admitted to hospitals with specified characteristics is shown below, in comparison with the corresponding proportions for others states:

	Per Cent of Child Admissions to Hospitals* with Specified Characteristics			
	Iowa	Highest	8 Selected States Average	Lowest
Separate pediatric unit ..	74.7	91	73	51
Graduate nurse on duty at all times in				
pediatric unit	54.2	71	61	41
Any house staff	43.2	90	56	8
Clinical laboratory	87.8	97	89	72
Selected clinical laboratory services available ..	79.4	96	77	50
Trained dietitian on staff ..	79.1	94	83	35
Separate ward for infants other than newborn ...	62.6	79	52	18
Average percentage	68.7	88	70	39

*Hospitals with 25 or more beds.

There were 70 registered hospitals of 25 or more beds in Iowa or 81 per cent of the total hospitals. There were 16 hospitals not registered by the American Medical Association. The registered hospitals cared for 36,084 children in the year, while the others admitted 2,433 children.

	Newborn: Percentage of Hospitalized Births Occurring in Hospitals with Specified Characteristics.*			
	Iowa	Highest	8 Selected States Average	Lowest
Any house staff	26.6%	90%	58%	4%
Graduate nurse on duty at all times in newborn nursery	94.6	98	91	77
Room used exclusively for preparation of formulae	56.4	94	78	29
Nursery for full term sick or suspect newborn, separate from well	23.9	66	37	0

*Hospitals with 25 or more beds.

Although there are only a small number (8 per cent) of child admissions, a considerable percentage (14 per cent) of births occur in hospitals having fewer than 25 beds. The deficiency of facilities in such hospitals in comparison with larger ones, as indicated in the following table, points to one of the problems in the provision of adequate hospital facilities.

	Per Cent of Hospitals with Specified Characteristics.	
	Fewer than 25 beds	25 Beds and more
Registered by A.M.A.	52.5%	81.4%
Clinical laboratory in hospital	11.9	71.4
Separate nursery for newborn only ..	95.1	100.
Graduate nurse on duty at all times in newborn nursery	35.0	91.7
X-Ray service in hospital	71.7	

¹⁵While 147 general hospitals reporting in the survey indicated 2,038 bassinets for newborn care and 200 incubators, it might give a false assurance of security. The separate nursery, separate adjunct facilities, and trained or instructed personnel (professional and nonprofessional) should be a part of the service offered in the care of the newborn. The State Division of Hospital Services has found many bassinets, particularly in crowded small hospitals, filled with newborn babies placed in corridors, closets, labor rooms, kitchens, and mothers' rooms, in hospitals with no restriction on visitors and in almost any place in the building, many of the places appearing to be most undesirable as far as the protection of the baby from infection and from contact with the public are concerned. Many of the small hospitals, particularly those under 25 beds, do not have an acceptable separate newborn nursery or adhere to recommended nursing standards for care of the newborn.

¹⁵In this report the term *hospitals* is limited to those caring for children, including the newborn. No institution is included having less than 5 beds for regular inpatient care. Federally owned hospitals (except those operated by the Bureau of Indian Affairs) are excluded.

¹⁶For the purpose of this report, *general* is taken to include maternity and pediatric. Of the 147 hospitals 3 were the former. A few did not admit children but did take maternity cases.

¹⁷Hospitals (of 25 beds or more) which have 5 or more beds permanently set aside for the care of children.

Summary of Selected Data Related to Care of Newborn in 147 Individual Hospitals of 5 or more Beds Reported in Iowa.

No. of:	
Beds	8,415
Bassinets	2,038
Incubators	200
Births in 1946	45,923
Prematures	1,483
*71 hospitals reporting. Data not tabulated for hospitals with 5 to 24 beds.	

Number of Hospitals with:	
Hand-washing facilities in nursery	67 out of 76*
Milk mixture sterilized for newborn	78 " 82*
Room exclusively for formula preparation	39 " 83*
Nursery for sick or suspect separate	
from well	16 " 145
Separate nursery for prematures	11 " 145
Graduate nurse on duty at all times	
in premature nursery	9 " 11
*Data not tabulated for hospitals with 5 to 24 beds.	

Amount of Floor Area Per Bassinet in Newborn Nursery	
	No. of Hospitals
Less than 15 Sq. Ft.	65
15 to 24 Sq. Ft.	34
25 or more Sq. Ft.	13

In 1946 there were 147 general hospitals in Iowa. Twenty-six were government owned; 63 were non-government, nonprofit; and 58 were privately owned. There was a total of 8,415 beds, of which 847 were for children, and 41,888 children were admitted in 1946.

Characteristics of the 147 Hospitals	No. reported
Pediatric unit	31
Communicable disease unit of 10 or more beds	3
Admitted poliomyelitis cases for care	10
Separate wards for infants (other than newborn)	25
House staff	12
Separate pediatric house staff	2
Graduate nurse on duty at all times in pediatric unit	24
Clinical laboratory in hospital	67
Qualified dietitian on staff	41
Blood or plasma bank in hospital or accessible	76
Rh-negative blood readily available	28
Oxygen tents in hospital for use with children	61
Isolation and/or cubicle separation procedure followed for new admissions	29

Facilities for the Care of Acute Poliomyelitis

During the last few years considerable attention has been focused on the problem of hospital facilities for the diagnosis and treatment of acute poliomyelitis. Of the 80 general hospitals with 25 or more beds reporting on the item, only 10 treated children with acute poliomyelitis, and 57 admitted suspected cases for diagnosis only.

Outpatient Services for Children

Of the state's 147 general hospitals caring for children 12 operate outpatient departments—5 in metropolitan, 3 in adjacent, and 4 in isolated counties—with a total of 10,711 outpatient visits by children during the study year.

The number of separate pediatric clinics furnishing specialist service to children is as follows:

	No. of Clinics
Allergy	0
Cardiology	3
Mental Hygiene	0
Luetic	2
Neurology	2
Surgery	1
Eye	1
Ear, Nose and Throat	1
Orthopedic	1
Dentistry	1

This number does not indicate the extent of this special service for children, since adult specialty clinics also see children.

PROGRESS SINCE THE SURVEY

An extensive survey such as this has been of great value in the stimulation it gave to all physicians, dentists, hospitals, nurses, and child-caring agencies of the state by an appraisal of child care. Everyone who filled out a questionnaire realized that there was much to be desired in improving the care of children.

Since this survey in 1946, considerable progress has been made in facilities for child health services in Iowa. Physicians, dentists and nurses have returned from the military services and are now practicing in the state, giving a better proportion of professional personnel to the population. There are now 50 pediatricians in Iowa, 14 of whom are certified by the American Board of Pediatrics. In 1946 there were 1,979 physicians practicing in Iowa. In 1948 2,629 physicians were reported by Dr. Virgil Hancher, president of the State University of Iowa, with only 4.4 per cent not in active practice. Although the figures may not be entirely comparable, this looks like an increase of 534 physicians during the past two years.

There are now 27 orthodontists and three pedodontists in practice, and a number of other dentists are giving more time to children's work. Thirty-one dentists attended the seminars in pedodontia given last year at the State University, and these courses will be repeated this year.

The work done at the Des Moines Health Center by dentists was:

	1946	Fillings	Extractions	Treatments	Examinations Only
Preschool age	23	9	40	4	
Ages 5 to 16	1,727	640	182	55	
1947					
Preschool age	56	72	20		
Ages 5 to 16	2,056	678	354		
1948					
Preschool age	43	6	15	7	
Ages 5 to 16	2,245	777	454	82	

Records of the Parent-Teachers Association in 1948 show that out of 116,704 dental cards issued to school pupils 59,659 were returned, indicating all dental work completed last year.

In May 1948 the house of delegates of the Iowa State Dental Society approved a state-wide program of sodium fluoride treatment for the teeth of all first grade pupils. With the cooperation of dentists and the State Division of Dental Hygiene, this program is in operation in Hancock, Marion, Mahaska, Lucas, Decatur, Wayne and Ringgold Counties. Over 2,000 children will receive treatment in the private dental office by their family dentist this year. The program will be extended to other counties.

Over 700 indigent eleventh and twelfth grade students have received the following services in the past year: x-rays, prophylaxis, extractions, amalgam and synthetic porcelain fillings.

A demonstration program is in effect in Marion and Mahaska Counties, which provides similar services for indigent first and second grade pupils.

Hospital building is going on throughout the state. The Blank Memorial Hospital for children in Des Moines built an addition in 1947 and now is a 112 bed children's hospital. It has increased its contagious section to 24 beds and has added a milk formula preparation kitchen, chemical laboratories, physical therapy, school room, and an outpatient section of 10 rooms. Pediatric training is being given to nurses, interns, and seven two year residents in all hospital services, outpatient, infant and preschool clinics and child guidance.

Premature centers are being planned in several areas of the state, with ambulance and nurse service available at all times. Such a center will be opened in the Blank Memorial Hospital in Des Moines with a full time pediatric director and nurses in charge who are specially trained in premature care.

There are 29 schools of nursing in Iowa approved by the Board of Nurse Examiners.¹⁹ These schools of nursing are in the larger hospitals of over 75 daily patient census. Six require clinical affiliation in pediatric nursing outside of the school of nursing. On Dec. 31, 1948, there were employed in Iowa 240 public health nurses in the various types of service. This gives a proportion of 1 nurse to 10,800 population, only 25 per cent of the need to meet a desirable proportion of 1 to 2,500 population. Thirty-five counties in the state had no public health nursing service of any kind.

The Iowa Society for Crippled Children has established a day school in Des Moines, where 15 pupils can have the services of a physiotherapist, a speech therapist and a school teacher. Consultation clinics are held once a month, available to any of the estimated 2,500 spastic children of the state.

The National Foundation for Infantile Paralysis has an active chairman in every county of the state and two state administrators. This organization has been remarkably efficient in furnishing hospitalization, medical and orthopedic care, and nurses for the children and adults who have had infantile paralysis.

During the year 1948 there were 23 field clinics held by the State Services for Crippled Children throughout the state of Iowa. Included in clinic areas were 73 counties. A total of 1,692 children were examined at field clinics throughout the year. The field clinic staff has been enlarged. At present it consists of orthopedists, pediatricists, psychologists from the Division of Child Welfare, a representative from the Department of Vocational Rehabilitation, a representative from the Department of Special Education, a nutritionist from the State Department of Health, medical social workers, field nurses, secretaries, a speech correctionist, and additional volunteer help from the local community.

These crippled children field clinics are sponsored by the county medical societies and are held in conjunction with an educational program given by members of the State University Staff at a regular scientific meeting of the county medical society.

Special weekly clinics are held in the University

of Iowa Medical School; namely, cardiac, diabetic, and cerebral palsy clinics.

The recent action of the State Legislature (April 12, 1949), making an effort to increase the enrollment in the State University of Iowa College of Medicine from 90 to 120 per year, will greatly help the medical care of our children in the future.

CONCLUSIONS AND RECOMMENDATIONS

The advantages of a survey such as this one carried out by the American Academy of Pediatrics are many. Comparisons can be made between regions of the country, between states, and between counties, in a variety of child health services and facilities. It is recognized that each state has its own needs peculiar to its geographic location, its economy, and the desire of its citizens. Nevertheless, much is to be gained by being able to see at a glance what other communities are doing.

It would be unfortunate, indeed, if the survey herein reported were to be filed away as just another survey. The following recommendations are therefore made:

1. That a continuing committee be appointed by the Iowa Pediatric Society, charged with the responsibility of studying the report in all its details with a view to making specific recommendations for the improvement of child health services in Iowa.
2. That this committee contact other leaders in child health in Iowa for the purpose of organizing a State Child Health Council.
3. That the Maternal and Child Health Committee of the Iowa State Medical Society be asked to review the report and make recommendations.
4. That pending action by these groups, immediate steps be taken in those areas shown by the study to reveal the greatest needs.
 - (a) More adequate coverage of the state by county health units.
 - (b) Initiation of programs to have all newborn nurseries observe accepted standards, as outlined by the Academy of Pediatrics committee on "Care of the Premature and Newborn."
 - (c) Establishment (with the cooperation of the Maternal and Child Health Division of the State Department of Health) of demonstration and teaching centers for the care of premature infants.
 - (d) Increased activity in postgraduate education of all physicians and nurses caring for children.
 - (e) Application by county hospitals in rural areas to medical centers training pediatric fellows for the services of a trained pediatrician. Medical services to children could be improved by rotating pediatric interns and fellows out into rural hospitals from the medical centers. This would give them needed experience in private practice and also bring newer methods and technics of child care and treatment to the physicians of these rural areas.

¹⁹Report of the Iowa Board of Nurse Examiners (June) 1948.

STATE DEPARTMENT OF HEALTH

Walter L. Biering

SUMMARY POLIOMYELITIS CASES

January 1 through July, 1948 and 1949

COUNTY	1948	1949
Adair	—	2
Adams	—	1
Allamakee	—	1
Appanoose	—	—
Audubon	—	2
Benton	—	—
Black Hawk	—	4
Boone	—	2
Bremer	—	1
Buchanan	—	—
Buena Vista	—	—
Butler	—	—
Calhoun	—	9
Carroll	—	—
Cass	1	2
Cedar	—	2
Cerro Gordo	2	4
Cherokee	—	1
Chickasaw	—	2
Clarke	—	—
Clay	—	—
Clayton	—	2
Clinton	—	1
Crawford	2	—
Dallas	1	2
Davis	—	—
Decatur	1	1
Delaware	—	2
Des Moines	—	—
Dickinson	1	1
Dubuque	1	23
Emmet	3	—
Fayette	—	1
Floyd	—	—
Franklin	1	2
Fremont	2	—
Greene	—	3
Grundy	—	1
Guthrie	—	16
Hamilton	—	2
Hancock	—	2
Hardin	1	12
Harrison	46	6
Henry	—	—
Howard	—	—
Humboldt	2	2
Ida	—	—
Iowa	—	3
Jackson	—	—
Jasper	1	1
Jefferson	—	—
Johnson	—	2
Jones	—	—
Keokuk	—	—
Kossuth	2	1
Lee	—	—
Linn	—	1
Louisa	—	—
Lucas	—	—
Lyon	1	2
Madison	—	2
Mahaska	—	1
Marion	—	—
Marshall	—	—
Mills	—	1
Mitchell	1	1
Monona	3	3
Monroe	—	—
Montgomery	1	—
Muscatine	1	—
O'Brien	1	1
Osceola	6	4
Page	—	2
Palo Alto	—	—
Plymouth	2	3

Pocahontas	1	3
Polk	7	10
Pottawattamie	29	6
Poweshiek	—	1
Ringgold	—	—
Sac	1	4
Scott	3	1
Shelby	6	3
Sioux	—	—
Story	1	6
Tama	1	2
Taylor	1	2
Union	—	—
Van Buren	—	—
Wapello	1	2
Warren	1	—
Washington	—	1
Wayne	—	—
Webster	3	12
Winnebago	—	1
Winneshieck	1	—
Woodbury	17	8
Worth	—	2
Wright	—	2
Totals	156 (July 31, 1948)	207 (July 30, 1949)

Poliomyelitis Cases
Week of August 6, 1949

Adair	1
Adams	1
Audubon	1
Black Hawk	3
Boone	4
Buchanan	2
Buena Vista	1
Clayton	1
Clinton	1
Crawford	1
Dallas	2
Decatur	1
Des Moines	4
Dubuque	13
Franklin	3
Greene	1
Guthrie	1
Hardin	1
Howard	2
Iowa	1
Jasper	1
Johnson	1
Lee	1
Linn	1
Lucas	1
Marion	1
Monona	1
Muscatine	1
Osceola	1
Page	1
Palo Alto	3
Pocahontas	1
Polk	6
Pottawattamie	4
Sac	1
Shelby	2
Sioux	3
Story	2
Taylor	2
Washington	1
Wayne	1
Webster	1
Woodbury	1
Wright	1
Total Cases Week Aug. 6, 1949	84
Total Cases Week Aug. 7, 1948	34
Total Cases August 7 1948	190
Total Cases August 6, 1949	291

HOW TO GET HELP FROM THE NATIONAL FOUNDATION FOR INFANTILE PARALYSIS* —WHEN POLIO STRIKES

1. At the first sign of illness call your own doctor. If he suspects polio he will report the case to the local health department and arrange for hospitalization or home care, as indicated. The National Foundation does not select physicians or hospitals. This is a family matter. If you have no family physician, call your city or county medical society, your board of health or the nearest hospital.

2. If your doctor says it is polio and requires hospitalization, the local chapter of the National Foundation will help arrange for transportation to a treatment center. As soon as the patient goes to the hospital—or, if your doctor advises, the patient can be treated at home—get in touch with your chapter of the National Foundation to arrange for any needed assistance.

(a) Most chapters are listed in the telephone book under "N" for National Foundation, "I" for Infantile Paralysis, and the letter starting the name of the county you live in, i. e., Washington County Chapter of the National Foundation for Infantile Paralysis. If you can't find it, check with your doctor, hospital or health department.

(b) Your chapter will get in touch with you as soon as it learns of the case through your physician, the hospital or the health department. However, late reporting or a heavy hospital load may delay this chapter contact. If you do not hear promptly, telephone or visit your chapter representative. You can ease your own worries sooner by making the approach yourself.

3. The chapter representative will notify the hospital that it is arranging with you for full or partial payment of expenses for medical care. Adults are as eligible for help as are children. Discuss with your chapter how much of the full bill the chapter will pay.

(a) March of Dimes' funds are used to help the medically indigent, but this is not the same as "indigent": it includes families of moderate income who cannot meet the high costs of modern care of this expensive disease. The help is a gift, not a loan. While families that can pay are expected to do so, no family is expected to impoverish itself to meet medical expenses for polio.

(b) Even if you can assume full costs for initial hospitalization, it is a good idea to see your chapter. If yours should be a patient who is severely affected—and this cannot be determined in the first few days—you may need help later on.

Bills incurred in the weeks before your chapter assumes financial responsibility cannot be paid months afterward, but the chapter will step in at whatever time you really need help. Have a frank, friendly talk with your chapter representative at the beginning.

4. Chapters pay for hospitalization, professional services, including nursing and physical therapy, transportation to and from hospitals, convalescent centers and clinics, treatment after hospitalization and appliances such as wheel chairs, braces, etc., as needed. There are no hard and fast rules. Each case is decided upon individual medical and financial needs. Assistance is given regardless of age, race, creed or color. More than 110,000 polio patients were directly assisted in full or in part up to the end of 1948.

5. In addition, your chapter can put you in touch with proper sources for nursing and physical therapy at home, can refer you to rehabilitation and vocational training agencies, will provide literature designed to foster better understanding of infantile paralysis—so you will know what to expect and how to help your polio patient back to a useful life.

These services are made possible by the March of Dimes each January.

MORBIDITY REPORT

Diseases	July '49	June '49	July '48	Most Cases Reported From:
Diphtheria	2	0	4	Scott, Benton
Scarlet Fever	13	26	31	Allamakee, Black Hawk, Boone
Typhoid Fever.....	0	0	2	.....
Smallpox	0	0	0	.....
Measles	119	312	157	Hancock, Polk, Union
Whooping Cough ...	33	9	40	Fremont, Polk
Brucellosis	96	32	93	Cedar, Cerro Gordo, Delaware, Polk
Chickenpox	64	145	63	Black Hawk, Dubuque, Linn, Story
German Measles	7	16	6	Buena Vista, Dubuque, Story, Woodbury
Influenza	0	0	0	.....
Meningitis, Meng....	5	1	6	Scattered
Mumps	137	197	136	Black Hawk, Cerro Gordo, Dubuque, Floyd, Story
Pneumonia	6	4	5	Polk, Ringgold
Poliomyelitis	170	16	91	Dubuque, Guthrie, Hardin, Polk, Webster
Rabies in Animals..	19	24	—	Pocahontas, Polk, Webster
Tuberculosis	105	86	85	For the State
Gonorrhea	77	63	149	For the State
Syphilis	205	179	148	For the State

NOTICE

Physicians are invited to indicate their desire to receive books for review through the JOURNAL, specifying the field of interest or particular book wanted. Upon request the JOURNAL staff will write for any new medical book which has not already been received. Address your requests to the JOURNAL, 505 Bankers Trust Building, Des Moines 9, Iowa.

*News Release from the National Foundation for Infantile Paralysis, Inc., 120 Broadway, New York 5, N. Y., dated Aug. 3, 1949.

The JOURNAL of the Iowa State Medical Society

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Important Meetings in September

For the last two years the Committee on Medical Service and Public Relations has held a state-wide meeting in the fall to which each county medical society was asked to send a representative whose expenses were paid by the State Society. The purpose of the meeting was to present to the doctors of the state a picture of the work being done by the Committee. That is why each county was urged to send some one to carry home a report of the discussions.

Another meeting is being planned for this fall, the date being set for Friday, September 23. An innovation will be the inclusion of editors and radio broadcasters in the program. The theme of the meeting will be the mutual interests of the three groups and the purpose, to work out closer areas and methods of cooperation. Speakers include, among others, Mr. Kenneth MacDonald, of the Des Moines *Register and Tribune*; Mr. Ed Breen of Station KVFD, Fort Dodge; Mrs. Molly Moon Samore, of Sioux City (a British housewife who discusses British medicine); Mr. Paul Cunningham, of Des Moines; and Mr. Alan Richardson, editor of *Medical Economics*, who has made a study of British medicine.

On the day before this large meeting, the Executive Council, the delegates and alternate delegates to the American Medical Association, and the members of the Committee on Medical Service and Public Relations are being called into session by the president, Dr. Alcock, for a most important discussion of State Society policies.

All members of the State Society are invited to

attend the Medical-Press-Radio Conference September 23. The Hotel Savery has been chosen as the meeting place and the program is an all day one, starting at 9:30 a. m. and running until 4:30 p. m., with time for a question and answer period.

District Meetings—Success or Failure?

Early in July the president of our Society, Dr. Alcock, asked the councilors to schedule district meetings to which state society officers and committee members might go to explain some of the many problems confronting the medical profession. Prior to 1941 it was customary to have one or more meetings a year in each councilor district, but the war, with its gasoline rationing and shortage of medical manpower, put a stop to such gatherings. Although four years have elapsed since the cessation of hostilities, the practice of having district medical meetings has waned.

District meetings have a definite functional place in the practice of medicine today. The average physician in the state probably is seeing more patients than he did ten years ago. As a result, he has less time to read and think about the economic aspects of medicine, and he is vaguely irritated and confused by the clamor in certain places for a compulsory tax on everyone to pay for medical care. For this physician, the district meeting provides a pleasant social get-together and a convenient, practically painless method of absorbing what he should know about the pressures besetting him.

By thus sugar-coating the pill, the State Society officers frankly hoped to reach a large segment of physicians who are not well aware of the many implications of the program being proposed in Washington today. They hoped to spur more doctors into action on three fronts—their county medical society, the State Society, and the national organization. They hoped that those who gripe about their state organization would attend and give voice to their complaints and wishes. They labeled the meetings as an opportunity to "take down your hair and talk things over."

To date seven meetings have been scheduled. Creston led the parade with a program July 26 at which some 40 persons were present. Albia followed August 10 with about 65 or 70 in attendance; Boone on August 11 had about 80; and Waterloo on August 16 had 75 or 80. Ida Grove had a meeting August 18, Monticello August 25, and Sheldon September 2. Mount Pleasant will have one early in September.

And what are the results of these meetings? Are they a success? Well, in nearly every instance about 10 per cent of the physicians in the district attended. (Wives account for the appar-

ent discrepancy in percentage figures.) The sad thing is that in most instances, the physicians who attend are those who *do* read and try to keep informed on organizational matters—those who are leaders in their community. The ones who need to hear what is being said are for the most part conspicuous by their absence. The good part of the meetings is that, for those who are present, they are a success. A great deal of interest is apparent, and the presentations are very good and to the point.

This is just the beginning of an attempt to revitalize medical activity on an individual basis. If the 10 per cent who attended these meetings carry back some of the enthusiasm and direction to the other 90 per cent, they can act as a leavening agent to make the whole group more active. Ten per cent cannot shoulder the whole load; the cooperation of 98 per cent is essential. We still feel sure that this can be attained, although the process may be a slow one.

Perhaps the most encouraging event of the entire year of 1949 was the announcement at the Waterloo meeting that the president's reorganization plan number one was defeated in the Senate by a vote of 60 to 32. To achieve this, the efforts of many doctors were required. This may well mark the turn in the tide. Up until about the first of March, the medical profession was a small voice in the wilderness trying to point out the dangers of socialized medicine. Against it were thrown the force and financial strength of governmental departments striving to "sell" the public on the need for a radical departure from the voluntary way of procuring medical care. Since March 1, the intensive campaign to tell the public what socialized medicine will mean to the people of this country has been carried forward by many physicians and their wives.

It has been said many times, and it is still true, that the physician holds a unique place in the affections and respect of his patients. He as an individual can do more to influence the final outcome of this issue than any great organization or campaign, no matter what their resources. He better than anyone else can tell his patients what government medicine would mean in the scheme of things if he will take the time and trouble to study the whole problem with its many ramifications, and then will talk to his patients.

District meetings—success or failure? For those who attend, they are a success; your officers hope that even those who do not attend will benefit eventually through some process of osmosis by which they may become aware of their part in the scheme of things.

The "Silent Partner" Story Developed for "One Man Institutions"

The achievement attained and victories won in the field of medicine have been many. In fact, to tell the long list of accomplishments by the illustrious members of our profession would require volumes to describe. But in spite of these great records of progress, the fact still remains that the men engaged in our profession are "one man institutions." So much so, that if through disability they are forced to stop, everything stops—except expense.

It is because of this undisputed fact that a story of study and research for the "silent partner" for these one man businesses had its inception and beginning over 10 years ago.

In the autumn of 1938 the man who originated the "silent partner" Income Replacement Plan was employed as vice president and agency director of a well known life insurance company. This agency director, Mr. B. W. Boyd, met with an automobile accident within 60 miles of his home while returning from a field trip, accompanied by his wife. As a result, he was disabled for 11 weeks and his wife was left a semi-invalid. Although Mr. Boyd was a life insurance man with years of experience, he—like the physicians—gave little thought or personal consideration to health and accident insurance. In fact, he relied on his personal friends in the health and accident business to supply him with what his friends considered his best policy—only to find, when the company proposed payment of the above claim, that upon the payment of the claim the policy would either have to be rideder for any further "back trouble" or, otherwise, cancelled as provided under clause 16 of the policy. He also learned that his wife's policy, by its terms, would only pay for 12 months, even though she was permanently disabled for life.

It was this personal experience that focused the attention of Mr. Boyd and his brother on health and accident insurance and later lead to the completion of the "silent partner" disability income protection plan for professional men.

The present program now being presented to the members of the Iowa State Medical Society is the result culminating from these men devoting their entire time, for almost 10 years, exclusively to the study of the professional men's needs and especially the needs of those engaged in the medical profession. Below are some of these more vital needs and basic underwriting conclusions:

First, it is their belief that no one can intelligently designate the age at which coverage for a doctor should expire, as many are forced to con-

tinue practice because of unfortunate financial reverses or other unforeseen contingencies.

Second, it is their belief that no one can specify how long the benefits of a policy should continue, for through examination and study of disability records, they found many cases suffering disabilities for years, even for life. Therefore, since those in the professional field are almost always one man institutions, it is very essential that there be no limit as to the period for which benefits are payable.

Third, it is also their belief that, while it is important for the professional man to have adequate income protection for temporary disabilities, it is really catastrophic if he does not provide sufficient protection against total permanent disabilities, or disabilities which may extend over a long period of time.

Listed below are some requisites which the Messrs. Boyds and Continental Casualty Company believe essential to good health and accident underwriting. All of these have been embodied in the "silent partner" Income Replacement Program now being extended to all eligible members of the Iowa State Medical Society.

Requisites to Good Group Health and Accident Underwriting

- No. 1. Elimination of Cancellation Clause No. 16.
- No. 2. Elimination of Age Termination Clause No. 20.
- No. 3. Elimination of Pro-Rating Clause No. 17.
- No. 4. Elimination of Assessment Liability Clause.
- No. 5. Elimination of Aggregate Liability Provisions or restricted recurring disability clauses.
- No. 6. Standard Provision No. 1 should be non-pro-rating.
- No. 7. Maximum age spread for entry to protection for many in advanced years.
- No. 8. Provision for pre-existing condition coverage with no "initial waiting benefit period."
- No. 9. Waiver of premium for total extended disability.
- No. 10. Provision for lifetime benefits.
- No. 11. Adequate hospital benefit.
- No. 12. Maximum benefits prior to period of adjustments.
- No. 13. Life income for loss of hands, feet or eyes, with acknowledged total permanent disability provision.
- No. 14. Provision for impartial arbitration.
- No. 15. Occupation Insuring Clause, especially for sickness, which causes 75 per cent of all claims.
- No. 16. Policy should provide a premium grace period.
- No. 17. Policy should pay regardless of whether disability is immediate.
- No. 18. The underwriting company should have adequate experience, age and size to assume life income obligation.

The Continental Casualty Company is the oldest and largest stock casualty company in the world writing lifetime disability protection. The Iowa State Medical Society is not in a position to sponsor this policy as a group; many county medical societies have approved this particular policy as worthy of consideration for all eligible members. Representatives of the company are contacting physicians throughout the state at the present time. These gentlemen will be very happy to answer any questions regarding the accident and health insurance of any member of the Society.

Rabies

As reported in the June issue of the JOURNAL, the number of rabies cases reported in animals continues to increase, and new counties are being added to the list as the disease makes its appearance in more communities of the state. To date, there have been 188 cases reported, 93 more cases than the total for the entire year of 1948. Moreover, there are undoubtedly many more cases that have not been verified by laboratory test.

In areas where rabies is endemic the management of persons bitten by animals is unsatisfactory. Any advantage gained from the use of vaccine must be balanced against the chance of resultant post-vaccinal encephalitis. The following indications for vaccination against rabies in human beings are suggested when (1) the biting animal is clinically rabid, or (2) is proved rabid by laboratory tests, (3) is suspected of being rabid, (4) in an endemic area a stray animal escapes after biting, and (5) an individual has handled an animal diagnosed as rabid and fresh abrasions of skin have been contaminated with saliva.

The number of persons who develop rabies after the bite of a rabid dog is not known with certainty but on the average may be from 5 to 15 per cent; if vaccine is given, the number may be reduced by half. Too often, however, the situation involves categories (3) and (4) above. In such instances it is particularly necessary to estimate the likelihood of severe vaccination reactions. McKendrick's figures of 1940 collected from world-wide sources show that paralyses are attended by a fatality rate of 5 per cent for the dorso-lumbar type and 30 per cent for the Landry type. Most of the vaccine used in this country is the Semple type, and few data are available on the actual number of paralytic accidents after use of such material. McCoy reported an incidence rate of 1 to 2,900 among 17,600 treated persons, but because 4 of the 6 reactions were fatal this rate probably is too low. Among 24,000 treated persons, Horack recorded a rate of 1 to 1,200, 10 per cent of which were fatal.

No cases of rabies vaccine encephalomyelitis have been reported so far this year in Iowa. In Los Angeles,* however, where rabies is endemic, during the seven year period from 1940 to 1946, 9 cases of severe postvaccinal reactions, including one death, occurred among 5,500 persons receiving vaccine (Semple), an incidence of 1 to 600.

Without discussing the theories regarding the etiology of this condition, it is likely that the incidence will be reduced markedly when a product more completely freed of brain tissue is produced; most present vaccines consist of approximately 10 per cent suspensions of rabbit brains. There

is ample evidence that rabies can be controlled in the absence of any considerable wild life reservoir by control of dogs.

No one will question the necessity for employing vaccine for any person bitten by an unidentified dog. Certainly, however, vaccine is given to many persons where it is not required. It would appear that the incidence of rabies vaccine encephalomyelitis is a real contraindication to its indiscriminate use.

*Am. J. Pub. Health, (July) 1949, C. F. Pait and H. E. Pearson.

Iowa Senators' Votes on President's Reorganization Plan No. 1

The President's reorganization plan number 1 would have created a Department of Welfare, incorporating therein the Federal Security Agency and other health agencies in a manner *not* recommended by the Hoover Commission. "The Commission concluded that an independent organization for medical services would be preferable to placing this function in a larger department, as originally proposed."

"The advantages of an independent agency, according to the Hoover Commission, are:

1. "The health agency, if submerged within a multipurpose department, would be more likely to find its health functions impeded by collateral considerations pertaining to welfare and insurance.

2. "Appropriations for health should, if possible, be clearly identified as such and not confused with those for social security, welfare or other social programs.

3. "Other departments, such as the armed forces, using the medical service agency, would be concerned only with its health functions as such and would thus be protected from any collateral and irrelevant considerations having to do with welfare, social security, etc.

4. "The special personnel policies recommended in the main Commission report (sec. xl) could be established with much greater freedom and better success for an independent agency than they could be for one of three bureaus standing side by side in a single department."

On the basis of that recommendation from the Hoover Commission, the medical profession opposed the reorganization plan number 1 and asked its duly elected representatives in Washington to give the matter careful consideration. Members of the Iowa State Medical Society should know that, when the vote was taken, both Senator Hick-enlooper and Senator Gillette voted in accord with the wishes of the medical profession.

FIRST STATEWIDE MEDICAL-PRESS-RADIO CONFERENCE

Ballroom—Hotel Savary—Des Moines

Friday, September 23, 1949

- 9:30-10:00 Registration
- 10:00-12:00 Panel Discussion
Wayland F. Hicks, M.D., Moderator.
Address of Welcome
Nathaniel G. Alcock, M.D., President.
Purposes of the Conference
Fred Sternagel, M.D., Chairman,
Committee on Medical Service and
Public Relations.
Viewpoint of a City Editor
Mr. Kenneth MacDonald, Managing
Editor, *Register and Tribune*.
Viewpoint of a Rural Editor
Speaker not yet scheduled.
Viewpoint of a Radio Broadcaster
Mr. Edward Breen, Manager, KVFD-
KFMY, Fort Dodge.
Summation
Donald C. Konzett, M.D., Chairman,
Program Committee.
- 12:15 Luncheon
- 1:30- 4:30 First Year of the British National
Health service
Mr. William Alan Richardson, Edi-
tor, *Medical Economics*.
A Britisher's Point of View
Mrs. Molly M. Samore, Sioux City.
Present Trends in Legislation
Mr. Paul Cunningham, Des Moines.
Questions and Answers

THE JOB IS INDIVIDUAL

The American public is becoming more and more insistent on better health facilities for all and within what they consider a reasonable cost. We cannot stop to bemoan the factors that have caused this increased demand. We can only recognize that the problem becomes more acute day by day, and we must find the answer to it.

Blue Cross and its member hospitals, and Blue Shield and its participating doctors are the ones closest to the problem. Ours is the responsibility of leading the program. It is imperative that we move ahead to better services for more people without delay.

F. P. G. Lattner, executive director, reports that Hospital Service, Inc., of Iowa allowed \$2,445,282.78 in Blue Cross services the first six months of 1949, as compared to \$2,072,159.94 during the same period of 1948, an increase of \$373,122.84. The length of stay has decreased .56 of a day. But more significant are the facts: that the average cost per case rose from \$61.26 in 1947 to \$66.91 in the first six months of 1949; the average cost per day increased from \$8.64 in 1947 to \$10.81 the first six months of 1949; and admission per 1,000 members increased from 139 to 143 in the same periods.

These are trends, and they place an additional responsibility on our hospitals and medical plans. The

(Continued on page 449)

THE JOB IS INDIVIDUAL

(Continued from page 448)

increased membership in these plans carries a moral obligation to work out a program so more people may feel secure in the thought that if they need hospital and medical care they will get it.

An important factor is that the general public wants to pay only for necessary care; hence luxury care, or shall we say uncontrolled care, will mean curtailment of benefits or higher costs. Economic overtones of today warn against either. Blue Cross and Blue Shield Plans must hold to their original philosophy of giving the most service for the subscriber's dollar.

SPEAKERS BUREAU RADIO SCHEDULE

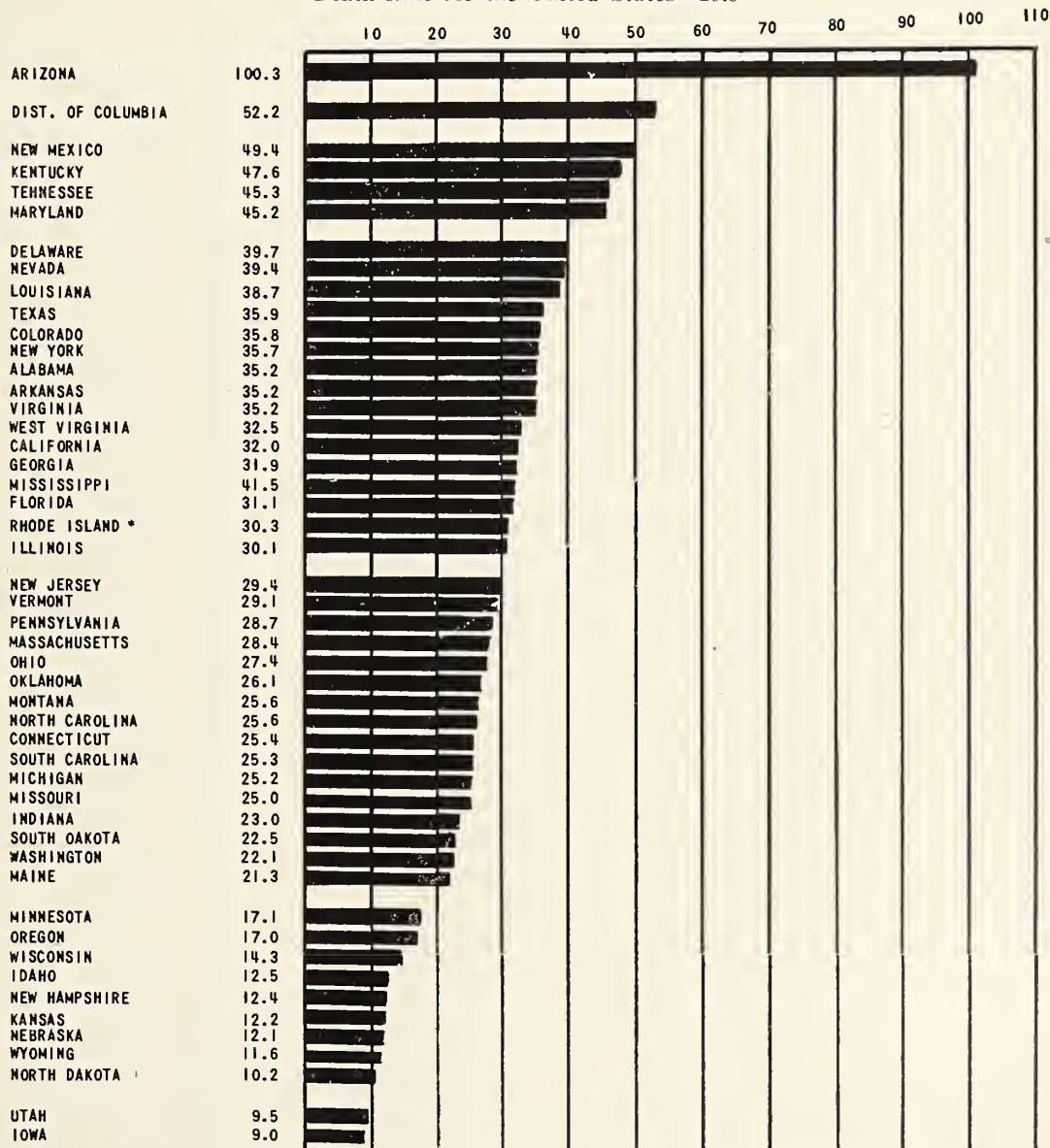
WSUI—Tuesdays at 11:45 a.m.

WOI—Thursday at 11:15 a.m.

Sept. 6-8	Peptic Ulcer (Medical and Surgical Treatment) David K. Hagggar, M.D., Harwarden
Sept. 13-15	Industrial Medicine Edward L. Rohlf, Jr., M.D., Waterloo
Sept. 20-22	Mental Hygiene Lee O. Snook, Jr., M.D., Wesley
Sept. 27-29	Cancer of the Breast John C. Garland, M.D., Marshalltown

TUBERCULOSIS DEATH RATE PER 100,000 POPULATION BY OCCURRENCE FOR EACH STATE—1948

Death Rate for the United States—29.8



*1947 Figure: 1948 Data not Available

SOURCE: National Tuberculosis Association
(Provisional Data by Occurrence)

COUNTY MEDICAL SOCIETY OFFICERS

COUNTY	PRESIDENT	SECRETARY	DEPUTY COUNCILOR
Adair.....	Ralph DeCicco, Greenfield.....	A. S. Bowers, Orient.....	A. S. Bowers, Orient
Adams.....	C. L. Bain, Corning.....	J. C. Nolan, Corning.....	A. W. Brunk, Prescott
Allamakee.....	J. W. Myers, Postville.....	C. R. Rominger, Waukon.....	J. W. Thornton, Lansing
Appanoose.....	R. R. Edwards, Centerville.....	E. F. Ritter, Centerville.....	E. A. Larsen, Centerville
Audubon.....	L. E. Jensen, Audubon.....	H. K. Merselis, Audubon.....	L. E. Jensen, Audubon
Benton.....	G. R. Woodhouse, Vinton.....	L. W. Koontz, Vinton.....	N. B. Williams, Belle Plaine
Black Hawk.....	D. W. Bickley, Waterloo.....	F. G. Loomis, Waterloo.....	A. J. Joynet, Waterloo
Boone.....	R. L. Wicks, Boone.....	H. C. Scharnweber, Boone.....	J. Q. Ganoe, Ogden
Bremer.....	O. C. Hardwig, Waverly.....	W. C. Wildberger, Waverly.....	F. R. Sparks, Waverly
Buchanan.....	J. F. Loock, Independence.....	R. L. Knipfer, Jesup.....	J. W. Barrett, Jr., Independence
Buena Vista.....	T. R. Campbell, Sioux Rapids.....	R. E. Mailliard, Storm Lake.....	H. E. Farnsworth, Storm Lake
Butler.....	E. M. Mark, Clarksville.....	F. F. McKean, Allison.....	Bruce Ensley, Shell Rock
Calhoun.....	P. W. Van Metre, Rockwell City.....	C. E. Knouf, Lake City.....	W. W. Weber, Pomeroy
Carroll.....	V. T. Lindsay, Glidden.....	L. H. Kuker, Carroll.....	W. L. McConkie, Carroll
Cass.....	M. T. Petersen, Atlantic.....	J. F. Moriarty, Atlantic.....	
Cedar.....	Fred Montz, Lowden.....	J. E. Smith, Clarence.....	P. M. Hoffman, Tipton
Cerro Gordo.....	L. W. Swanson, Mason City.....	J. W. Lannon, Mason City.....	G. J. Sartor, Mason City
Cherokee.....	D. C. Koser, Cherokee.....	H. D. Seely, Cherokee.....	C. H. Johnson, Cherokee
Chickasaw.....	E. C. O'Connor, New Hampton.....	P. C. Richmond, New Hampton.....	P. E. Gardner, New Hampton
Clarke.....	F. S. Bowen, Woodburn.....	C. R. Harken, Osceola.....	H. E. Stroy, Osceola
Clay.....	C. C. Jones, Spencer.....	D. H. King, Spencer.....	C. C. Jones, Spencer
Clayton.....	A. R. Powell, Elkader.....	T. W. Lichter, Edgewood.....	P. R. V. Hommel, Elkader
Clinton.....	V. W. Petersen, Clinton.....	May Danielson, Clinton.....	R. F. Luse, Clinton
Crawford.....	R. A. Huber, Charter Oak.....	C. Dudley Miller, Denison.....	C. L. Sievers, Denison
Dallas-Guthrie.....	F. A. Wilke, Perry.....	C. A. Nicoll, Panora.....	
Davis.....	Richard Schoonover, Bloomfield.....	H. C. Young, Bloomfield.....	C. H. Cronk, Bloomfield
Decatur.....	F. A. Bowman, Leon.....	E. E. Gamet, Lamoni.....	F. A. Bowman, Leon
Delaware.....	Paul Stephen, Manchester.....	R. E. Clark, Manchester.....	
Des Moines.....	W. R. Lee, Burlington.....	R. D. Allen, Burlington.....	F. G. Ober, Burlington
Dickinson.....	J. J. Buchanan, Milford.....	R. F. Wolcott, Spirit Lake.....	T. L. Ward, Arnolds Park
Dubuque.....	R. P. Rusk, Dubuque.....	R. D. Storck, Dubuque.....	J. C. Painter, Dubuque
Emmett.....	J. B. Knipe, Armstrong.....	Hugo Lindholm, Armstrong.....	S. C. Kirkegaard, Estherville
Fayette.....	C. C. Hall, Maynard.....	M. G. Beddoes, Oelwein.....	C. C. Hall, Maynard
Floyd.....	R. W. Stober, Charles City.....	E. V. Ayers, Charles City.....	R. A. Fox, Charles City
Franklin.....	W. R. Arthur, Hampton.....	W. W. Taylor, Sheffield.....	J. C. Powers, Hampton
Fremont.....	Ralph Lovelady, Sidney.....	A. E. Wanamaker, Hamburg.....	A. E. Wanamaker, Hamburg
Greene.....	P. E. Lohr, Churдан.....	E. D. Thompson, Jefferson.....	L. C. Nelson, Jefferson
Grundy.....	H. V. Kahler, Reinbeck.....	C. H. Bartruff, Reinbeck.....	W. O. McDowell, Grundy Center
Hamilton.....	J. L. Ptacek, Webster City.....	B. F. Howard, Webster City.....	M. B. Galloway, Webster City
Hancock-Winnebag.....	D. F. Shaw, Britt.....	I. E. Brown, Forest City.....	C. V. Hamilton, Garner
Hardin.....	E. J. Steenrod, Iowa Falls.....	F. N. Cole, Iowa Falls.....	F. N. Cole, Iowa Falls
Harrison.....	C. W. Byrnes, Dunlap.....	Hans Hansen, Logan.....	F. H. Hanson, Magnolia
Henry.....	B. D. Hartley, Mt. Pleasant.....	J. R. Beebe, Mt. Pleasant.....	J. S. Jackson, Mt. Pleasant
Howard.....	F. E. Giles, Cresco.....	C. W. Ahl, Cresco.....	
Humboldt.....	N. E. T. Schultz, Humboldt.....	A. S. Arent, Humboldt.....	I. T. Schultz, Humboldt
Ia.....	E. H. Heilman, Ida Grove.....	J. B. Dressler, Ida Grove.....	E. S. Parker, Ida Grove
Iowa.....	D. F. Miller, Williamsburg.....	J. E. Sinn, Williamsburg.....	J. E. Sinn, Williamsburg
Jackson.....	J. J. Tilton, Bellevue.....	J. E. Swegart, Maquoketa.....	F. J. Swift, Maquoketa
Jasper.....	J. W. Ferguson, Newton.....	J. R. Singer, Newton.....	R. W. Wood, Newton
Jefferson.....	I. N. Crow, Fairfield.....	Robert A. Ryan, Fairfield.....	I. N. Crow, Fairfield
Johnson.....	R. T. Tidrick, Iowa City.....	R. C. Hardin, Iowa City.....	G. C. Albright, Iowa City
Jones.....	R. D. Paul, Anamosa.....	R. W. Myers, Monticello.....	T. M. Redmond, Monticello
Keokuk.....	K. L. McGuire, Keota.....	John Maxwell, What Cheer.....	D. L. Grothaus, Delta
Kossuth.....	C. H. Cretzmeier, Algona.....	M. G. Bourne, Algona.....	J. G. Clapsaddle, Burt
Lee.....	R. E. Cooper, Keokuk.....	H. T. Werner, Ft. Madison.....	R. L. Feightner, Fort Madison
Linn.....	D. S. Challed, Cedar Rapids.....	John Parke, Cedar Rapids.....	G. H. Ashline, Keokuk
Louisia.....	E. S. Groben, Columbus Junction.....	J. H. Chittum, Wapello.....	B. F. Wolverton, Cedar Rapids
Lucas.....	H. D. Jarvis, Chariton.....	R. E. Anderson, Chariton.....	J. H. Chittum, Wapello
Lyon.....	A. C. Wubben, Rock Rapids.....	S. H. Cook, Rock Rapids.....	S. L. Throckmorton, Chariton
Madison.....	G. J. Anderson, Winterset.....	P. F. Chesnut, Winterset.....	S. H. Cook, Rock Rapids
Mahaska.....	M. R. Greenlee, Oskaloosa.....	R. M. Collison, Oskaloosa.....	C. B. Hickenlooper, Winterset
Marion.....	F. M. Roberts, Knoxville.....	D. S. Burbank, Pleasantville.....	E. B. Wilcox, Oskaloosa
Marshall.....	R. C. Carpenter, Marshalltown.....	H. E. Sauer, Marshalltown.....	H. L. Bridgeman, Knoxville
Mills.....	W. A. DeYoung, Glenwood.....	T. E. Shonka, Malvern.....	A. D. Woods, State Center
Mitchell.....	W. E. Owen, St. Ansgar.....	C. F. Watson, Stacyville.....	D. W. Harman, Glenwood
Monona.....	L. A. Gaukel, Onawa.....	P. L. Wolpert, Onawa.....	T. S. Walker, Riceville
Monroe.....	H. J. Richter, Albia.....	T. A. Moran, Melrose.....	C. W. Young, Onawa
Montgomery.....	Helge Borre, Red Oak.....	E. M. Sorensen, Red Oak.....	H. J. Richter, Albia
Muscatine.....	K. E. Wilcox, Muscatine.....	R. W. Asthaler, Muscatine.....	Oscar Alden, Red Oak
O'Brien.....	J. C. Peterson, Hartley.....	W. S. Balkema, Sheldon.....	C. P. Phillips, Muscatine
Osceola.....	E. S. Aelits, Sibley.....	Frank Rizzo, Sibley.....	T. D. Kas, Sutherland
Page.....	C. H. Brush, Shenandoah.....	F. S. Sperry, Clarinda.....	Frank Reinsch, Ashton
Palo Alto.....	J. W. Woodbridge, Emmetsburg.....	W. A. Johnson, Emmetsburg.....	W. H. Maloy, Shenandoah
Plymouth.....	R. J. Fisch, Le Mars.....	L. C. O'Toole, Le Mars.....	H. L. Brereton, Emmetsburg
Pocahontas.....	J. B. Thielen, Fonda.....	C. L. Jones, Gilmore City.....	W. L. Downing, Le Mars
Polk.....	Fred Sternagel, West Des Moines.....	B. M. Merkel, Des Moines.....	C. L. Jones, Gilmore City
Pottawattamie.....	Isaac Sternhill, Council Bluffs.....	S. A. Cohen, Council Bluffs.....	J. B. Synhorst, Des Moines
Poweshiek.....	T. E. Brobyn, Grinnell.....	E. S. Korfmaacher, Grinnell.....	G. N. Best, Council Bluffs
Ringgold.....	W. G. Doss, Mount Ayr.....	J. W. Hill, Mount Ayr.....	E. S. Korfmaacher, Grinnell
Sac.....	J. W. Gauger, Early.....	C. E. Lierman, Lake View.....	E. J. Watson, Diagonal
Scott.....	E. G. Sentry, Davenport.....	M. J. Brown, Davenport.....	J. R. Dewey, Schaller
Shelby.....	L. W. Savage, Harlan.....	J. H. Spearing, Harlan.....	A. P. Donohoe, Davenport
Sioux.....	L. R. Hegg, Rock Valley.....	C. B. Murphy, Alton.....	Wm. Doornink, Orange City
Story.....	Richard Mordaunt, Nevada.....	W. B. Armstrong, Ames.....	Bush Houston, Nevada
Tama.....	C. R. Roberts, Dysart.....	A. J. Havlik, Tama.....	A. A. Pace, Toledo
Taylor.....	G. W. Rimel, Bedford.....	M. R. Crew, Clearfield.....	G. W. Rimel, Bedford
Union.....	J. G. Macrae, Creston.....	C. E. Sampson, Creston.....	C. C. Rambo, Creston
Van Buren.....	J. T. Worrell, Keosauqua.....	L. A. Coffin, Farmington.....	L. A. Coffin, Farmington
Wapello.....	W. N. Whitehouse, Ottumwa.....	E. B. Hoeven, Ottumwa.....	C. A. Henry, Farson
Warren.....	E. N. Shaw, Indianola.....	C. H. Mitchell, Indianola.....	C. H. Mitchell, Indianola
Washington.....	D. G. Sattler, Kalona.....	W. S. Kyle, Washington.....	E. D. Miller, Wellman
Wayne.....	J. H. McCall, Allerton.....	C. F. Brubaker, Corydon.....	J. H. McCall, Allerton
Webster.....	H. T. Larsen, Ft. Dodge.....	D. S. Egbert, Ft. Dodge.....	H. E. Nelson, Dayton
Winnebago.....	J. G. Goggin, Ossian.....	G. C. Boller, Calmar.....	L. C. Kuhn, Decorah
Woodbury.....	E. M. Honke, Sioux City.....	E. H. Sibley, Sioux City.....	D. B. Blume, Sioux City
Worth.....	S. S. Westly, Manly.....	G. S. Westly, Manly.....	S. S. Westly, Manly
Wright.....	R. L. Gorrell, Clarion.....	J. R. Christensen, Eagle Grove.....	J. H. Sams, Clarion

NEWS NOTES

from the

Committee on Medical Service and Public Relations

New Assistant to Field Secretary

The Board of Trustees of the Iowa State Medical Society and the officials of Iowa Medical Service have approved the employment of a man to assist the present field secretary with some of his duties. Mr. Thomas J. Garbett, of Des Moines, has been employed, beginning Sept. 1, 1949. Mr. Garbett has been employed for the past two and one-half years as vocational appraiser by Drake University. Previous to this Mr. Garbett was a field representative with the Iowa State Department of Public Instruction and prior to that assistant veterans employment representative with the United States Employment Service.

Mr. Garbett was graduated from the College of Liberal Arts, Simpson College, Indianola, in 1939. He is 32 years of age, married, and a veteran of World War II. He served in the U. S. Army 45 months, with 32 months overseas. Mr. Garbett was a forward observer with the Thirty-Fourth Infantry Division in the European Theater of Operations.

The first month to 60 days Mr. Garbett will work with the present field secretary, familiarizing himself with the functions of the Iowa State Medical Society as well as Iowa Medical Service (Blue Shield). He will have office space in the Iowa State Medical Society offices. Fifty per cent of his time will be spent working for Iowa Medical Service, which will share the expense for the new employee equally with the Iowa State Medical Society. His activities will be directed by the Committee on Medical Service and Public Relations through the present field secretary.

District Meetings

The first of the district meetings called by the president of the Iowa State Medical Society, Dr. Nathaniel G. Alcock, was held in Creston, Tuesday, June 26, 1949. Dr. James G. Macrae, councilor for the tenth district, arranged the meeting and served as moderator. Guest speakers were Dr. Ben T. Whitaker, trustee, of Boone; Dr. E. E. Shaw, delegate to the American Medical Association, of Indianola; Dr. G. V. Caughlan, delegate to the American Medical Association, of Council

Bluffs; Dr. Fred Sternagel, chairman, Committee on Medical Service and Public Relations, of West Des Moines; Mr. Don L. Taylor, field secretary, Iowa State Medical Society. Approximately 50 persons attended this first meeting held at the Crestmoor Country Club in Creston. The Woman's Auxiliary was well represented with about 20 members in attendance. The meeting was held mainly to allow the county society members to air their views concerning the activities of the Iowa State Medical Society and the American Medical Association. There was general discussion by the guest speakers and the audience on the following subjects: educational campaign of the American Medical Association, national and state legislation, voluntary insurance plans, and other current topics. There were not many questions asked during the formal meeting, but after the meeting was adjourned many problems were discussed in individual conversations. It was the consensus of those present that the meeting did serve a useful purpose, and that a great deal was accomplished. Similar meetings will be held in other districts of the state.

The ninth district meeting was held at the Albia Country Club, Albia, Wednesday evening, August 10. Approximately 60 persons were in attendance. The Woman's Auxiliary of the State Society was well represented. The meeting was conducted by Dr. Elias B. Howell, councilor for the ninth district, and guest speakers were: Dr. Nathaniel Alcock, president, Iowa State Medical Society; Dr. E. E. Shaw, delegate to the American Medical Association; Dr. A. B. Phillips, secretary, Iowa State Medical Society; Mr. I. W. Myers, legal consultant, Iowa State Medical Society; Miss Mary McCord, executive secretary, Iowa State Medical Society; Mr. Don L. Taylor, field secretary, Iowa State Medical Society. Subjects similar to those mentioned in the above report of the tenth district meeting were discussed. There was a great deal of interest shown, and many favorable comments followed the close of the meeting.

(Continued on page 460)

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ATLAS OF ROENTGENOGRAPHIC POSITIONS—By Vinita Merrill, while Educational Director, Picker X-Ray Corp. In two volumes. St. Louis, C. V. Mosby Co., 1949. Price \$30.00.

BLAKISTON'S NEW GOULD MEDICAL DICTIONARY: A Modern Comprehensive Dictionary of the Terms Used in All Branches of Medicine and Allied Sciences, Including Medical Physics and Chemistry, Dentistry, Pharmacy, Nursing, Veterinary Medicine, Zoology and Botany, as well as Medicolegal Terms; With Illustrations and Tables.—EDITORS: HAROLD WELLINGTON JONES, M.D., Colonel, U.S. Army, Ret.; Contributing Editor, *Encyclopedia Americana*; Former Director, Army Medical Library, Washington, D. C.; NORMAN L. HOERR, M.D., Ph.D., Professor of Anatomy, School of Medicine, Western Reserve University; ARTHUR OSOL, Ph.D., Professor of Chemistry, Director of Chemistry Departments, Philadelphia College of Pharmacy and Science; Editor-in-Chief, *United States Dispensatory*; With the Assistance of an Editorial Board and over 100 Contributors. First Edition. Philadelphia and Toronto, The Blakiston Co., 1949. Price \$8.50, \$10.75 and \$13.50.

THE CIBA COLLECTION OF MEDICAL ILLUSTRATIONS: A Compilation of Pathological and Anatomical Paintings—Prepared by Frank H. Netter, M.D., Summit, N. J., Ciba Pharmaceutical Products, Inc., 1949. Price \$6.50.

GYNAECOLOGICAL AND OBSTETRICAL ANATOMY—By C. F. V. Smout, M.D., M.R.C.S., Assistant Professor, Department of Anatomy, Sub-Dean and Tutor, Faculty of Medicine, University of Birmingham. With Chapters on "The Histology of the Female Reproductive Tract and its Endocrine Control."—By F. JACOBY, M.D., Ph.D., Lecturer in Histology, Department of Anatomy, University College, Cardiff; formerly, Department of Physiology, University of Birmingham. Second Edition. Baltimore, Williams and Wilkins, 1949. Price \$11.00.

THE PRACTICE OF REFRACTION—By Sir Stewart Duke-Elder, K.C.V.O., M.A., D.Sc. (St.And.), Ph.D. (Lond.),

M.D., F.R.C.S., Hon.D.Sc. (Northwestern), Surgeon Oculist to H.M. The King; Knight of Grace of the Order of St. John; Consulting Ophthalmic Surgeon to the Army and the Royal Air Force; Director of Research, Institute of Ophthalmology, University of London; Consulting Ophthalmic Surgeon, Moorfields Westminster and Central Eye Hospital; Ophthalmic Surgeon, St. George's Hospital. Fifth Edition. St. Louis, C. V. Mosby Co., 1949. Price \$6.25.

SHEARER'S MANUAL OF HUMAN DISSECTION—Edited by Charles E. Tobin, Ph.D., Associate Professor of Anatomy, The University of Rochester School of Medicine and Dentistry. Second Edition. Philadelphia, The Blakiston Co., 1949. Price \$4.50.

SYNOPSIS OF HERNIA—By Alfred H. Iason, M.D., Attending Surgeon, Adelphi Hospital; Director of Surgery, Brooklyn Hospital for the Aged; Instructor in Anatomy, New York Medical College. Illustrations by ALFRED FEINBERG, Instructor of Medical Illustration, Department of Pathology, College of Physicians and Surgeons, New York City. New York, Grune & Stratton, 1949. Price \$6.50.

TEXTBOOK OF GENITO-URINARY SURGERY—Edited by H. P. Winsbury-White, M.D., Ch.B., F.R.C.S. (Edin.), F.R.C.S. (Eng.), Surgeon, St. Paul's Hospital for Genito-Urinary Disease, London; Urologist, Queen Elizabeth Hospital for Children; Lecturer, Institute of Urology and (in Urology) Institute of Child Health, University of London. Baltimore, the Williams and Wilkins Co., 1948. Price \$20.00.

A TEXTBOOK OF NEUROPATHOLOGY: With Clinical Anatomical and Technical Supplements—By Ben W. Lichtenstein, B.S., M.S., M.D., Associate Professor of Neurology, University of Illinois College of Medicine; State Neuro-pathologist, Illinois Neuro-psychiatric Institute; Attending Neurologist, Cook County Hospital; Professor of Neurology, The Cook County Graduate School of Medicine; Attending Neuro-psychiatrist, Mount Sinai Hospital, Chicago. Philadelphia and London, W. B. Saunders Co., 1949. Price \$9.50.

BOOK REVIEWS

ATLAS OF PERIPHERAL NERVE INJURIES

By William R. Lyons, Ph.D., Associate Professor of Anatomy, University of California Medical School; and BARNES WOODHALL, M.D., Professor of Neurosurgery, Duke Medical School, Durham, N. C. Philadelphia and London, W. B. Saunders Co., 1949. Price \$16.00.

Dr. R. Glen Spurling, in the foreword to this book, points out that "The few and almost embryonic centers in which neurosurgery was done in World War I were replaced in World War II by 12 well organized, well equipped and well staffed neurosurgical centers in which important advances were made in many branches of neurosurgery."

Nevertheless, it is rather remarkable, considering the numerous wartime handicaps, that Lyons and Woodhall should have made the truly outstanding study of peripheral nerve specimens presented in this large 339 page *Atlas*, which includes 335 plates on 10 by 12 $\frac{1}{4}$ inch pages.

This book will be of especial interest to surgeons and pathologists, for, as Spurling states, it "develops an approach to acceptable peripheral nerve surgery which no other text in the field has heretofore developed."

R. F. B.

CURRENT THERAPY 1949

Latest Approved Methods of Treatment for the Practicing Physician

By Howard F. Conn, M.D., Editor. Consulting Editors: M. Edward David, Vincent J. Derbes, Garfield G. Duncan, Hugh J. Jewett, William J. Kerr, Perrin H. Long, H. Houston Merritt, Paul A. O'Leary, Walter L. Palmer, Hobart A. Reimann, Cyrus C. Sturgis, Robert H. Williams. Philadelphia and London, W. B. Saunders Co., 1949. Price \$10.00.

This book, first of its kind, has attempted to furnish the busy practitioner with the latest methods of treatment of a specific condition without making it cumbersome with review of controversial literature. It also presupposes that the diagnosis has already been established. Where there are existing variations in the standard therapy, two or more methods are presented in an impartial manner.

Current Therapy is an excellent book, written concisely and accurately by well known authorities in the field of internal medicine. It is conveniently compiled and indexed into various sections of internal medicine.

It should be highly recommended and prove useful to medical students and physicians.

J. K. U.

NEOPLASMS OF BONE

By Bradley L. Coley, M.D., Attending Surgeon, Bone Tumor Department, Memorial Hospital for Cancer and Allied Diseases; Assistant Professor of Clinical Surgery, Cornell. Paul B. Hoeber, Inc., Medical Book Department of Harper & Bros., New York, 1949. Price \$17.50.

This volume represents the long experience of a distinguished physician and his father in the subject at hand. It represents clinical aspects of neoplasms of bone, referring the reader to other texts dealing in more detail with microscopic pathology. The text is liberally supplied with excellent illustrations. The subject matter is organized in such a manner as to make it readily available in type easy to read and well supported by biographical references. Dr. Coley is to be congratulated for the preparation of this text which should be included in the library of any physician who encounters neoplasms of bone.

E. M. G.

ON THE CONTRIBUTIONS OF HUGH OWEN THOMAS, SIR ROBERT JONES, JOHN RIDLON, M.D., TO MODERN ORTHOPEDIC SURGERY

By H. Winnett Orr, M.D., Chief Surgeon, Nebraska Orthopedic Hospital, Lincoln, Neb.; with a Supplement on "Ridlon and his Share in Moulding Orthopedic Surgery," By ARTHUR STEINDLER, M.D., Professor of Orthopedic Surgery, State University of Iowa College of Medicine, Iowa City. Charles C. Thomas, Springfield, Ill., 1949. Price \$4.50.

Dr. Orr has accumulated most interesting material dealing with the contributions of Thomas, Jones and Ridlon to orthopedic surgery. The book is further embellished by a supplement on Dr. Ridlon by Dr. Arthur Steindler. The authors are both in a position to properly evaluate the contributions of pioneer orthopedic surgeons to modern practice.

E. M. G.

OPERATIVE SURGERY

By Frederick C. Hill, B.A., M.S. (Surg.), M.D., Associate Professor of Surgery, Creighton University School of Medicine, Omaha, Neb.; Foreword by CHARLES W. MAYO, B.A., M.S., (Surg.), M.D., Section on Surgery, Mayo Clinic, Rochester, Minn. New York, Oxford University Press, 1949. Price \$12.75.

This author has presented a single volume work on general surgery in which he discusses the gross appearance of surgical lesions with a fairly detailed description of surgical procedures. Also, he indicates proper treatment and gives notes on preoperative and postoperative care.

This text is of special value to the resident, intern, and inexperienced surgeon, because highly technical

procedures in specialized fields and individual idiosyncrasies of technic have been avoided as much as possible, leaving only applicable and practical material.

In the words of Dr. Charles W. Mayo in the foreword to this book, "If old and new knowledge can be, as in this work, tabulated and consolidated, digested and redigested, on the basis of long experience, and then reformed in such a manner that each surgical entity is dealt with concisely and yet the relationship of that entity to the entire body is not lost sight of, then a worthy book has been written."

J. L. M.

1948 YEAR BOOK OF GENERAL THERAPEUTICS

Edited by Oscar W. Bethea, Ph.M., M.D., F.A.C.P., Professor of Clinical Medicine, Tulane University School of Medicine (retired); Senior in Medicine, Southern Baptist Hospital; Consulting Physician, Charity Hospital; Member of the Revision Committee of the *United States Pharmacopeia 1930-1940*; author of *Clinical Medicine and Materia Medica, Drug Administration and Prescription Writing*. Chicago, The Year Book Publishers, Inc., 1949. Price \$4.25.

The selection of material for this book from the literature of 1948 appears to be representative of the significant advances made in general therapeutics. The abstracts are adequate. The subject matter is divided into logical groups, e.g., the various antibiotics, antibodies and antigens, hormones, heart and blood vessels, etc. The section concerning the heart and blood vessels is of considerable merit in presenting various controversial points and newer concepts of treatment. The editor's comments are minimal and concise.

This book should serve as a valuable reference to the busy practitioner.

M. E. A.

PSYCHODYNAMICS AND THE ALLERGIC PATIENT

By Harold A. Abramson, M.D., F.A.C.A., Associate Physician for Allergy, The Mount Sinai Hospital, New York City; Consulting Physician for Allergy, Sea View Hospital, Staten Island, N. Y.; Assistant Professor of Physiology, Columbia University, New York City. An official publication of the American College of Allergists. St. Paul and Minneapolis, The Bruce Publishing Co., 1948. Price \$2.50.

This book, authorized by the American College of Allergists, presents case histories and a panel discussion dealing with the relationship of emotions to allergic manifestations. Those physicians dealing with allergies will find helpful ideas in the volume.

D.J.G.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. ROGER M. MINKEL, Fort Dodge

President-elect—MRS. CLAIRE H. MITCHELL, Indianola

Secretary—MRS. IVAN K. SAYRE, St. Charles

Treasurer—MRS. WILLIAM B. CHASE, JR., Des Moines

Corresponding Secretary—MRS. CHARLES H. COUGHLAN, Fort Dodge

PRESIDENT'S PAGE

The Auxiliary has been alerted for immediate action. An urgent appeal has been made for our support of the medical profession. A program has been charted for us. It is time to consider how well we are doing our share, how well we are cooperating with our county and state societies.

The Auxiliary knows well that its job is to arouse other women to the inherent dangers of the "political medicine" advocated by the supporters of the Murray-Dingell bill (S.5). The Auxiliary knows that American medicine is engaged in a life and death struggle for survival as a free institution. The Auxiliary knows that this is not just a medical issue, but that the health of America is at stake. Political medicine means bad medicine, inferior medical care, extortionate payroll taxes, invasion of privacy and destruction of voluntary health insurance.

What is being advocated is a European assembly-line type of medical care. It is not logical that well America should copy from a sick Europe.

We know that many large "interests" in this country are aligned against us. It has resolved itself into a choice between socialism and fundamental initiative. We know which system made this country great.

But we cannot do our share, we cannot help the medical profession, if we do not know the facts and how to use them wisely. There is no time to make mistakes. There is only time for a clear, honest presentation of the case to those groups in your counties and states who want to know the truth, and whose voices will be heard in support of that truth.

Don't permit the single point of discussion—compulsory health insurance—to become involved and confused with numerous other health and hospital problems. The issue is simple, and in confusion lies the way for loss of everything for which American medicine stands.

The program of the American Medical Association is a positive, constructive one. Know this program, for it is the answer to those who would change the entire structure of medical care as we know it.

Auxiliary units can work most effectively through their regular channels to enlighten others and enlist support. This is a grass roots campaign, and it is in the grass roots of our country that the greatest strength is to be found. Literature should be distributed. Every woman's organization must be con-

tacted, and given the facts. Therein lies our strength.

Talk to your grocer, your insurance man, your newspaper editor. Tell them simply: "Socialization never stops. You may be next." Does this sound too ineffective? Remember that America was built upon a foundation of people speaking out, speaking the truth. A groundswell of truth can overcome the most carefully contrived plan that has its basis in political opportunism.

The marshalling of opposition to compulsory health insurance is well underway. It is our task to lend our support on county and state levels. If we reach the grass roots, we will have succeeded. It is a critical time. Each of us faces an obligation—to the people of our country, to the medical profession and to ourselves.

Mrs. Luther H. Kice
The Bulletin (May) 1949

ATTENTION AUXILIARY MEMBERS!

Order cards for copies of "THE DOCTOR," the famous Fildes painting, are being mailed to the members of the American Medical Association by Whitaker and Baxter, directors of the A.M.A. National Education Campaign this month. This picture carries with it a graphic story about the threat of Government controlled medicine and what it would mean to the lay public. The directors of the campaign feel that its message will be most effective in arousing public support for medicine's cause, and are very anxious to have this picture displayed in all doctors' offices.

The members of the Woman's Auxiliary could make a real contribution to this campaign if they would cooperate in the distribution of the poster by encouraging doctors to display it in their offices and checking with the doctors in their communities to make certain that they have received copies of it. Additional copies can be secured by writing to: Central Office of the Woman's Auxiliary, 535 North Dearborn Street, Chicago 10, Illinois.

The Bulletin (May) 1949

THE AUXILIARY AND COMPULSORY HEALTH INSURANCE

Auxiliary members must not relax their efforts in keeping informed concerning developments toward compulsory health insurance. Recommended material for distribution is available from Auxiliary Headquarters, 629 Eleventh Ave. North, Fort Dodge. Write for yours today.

AN AUXILIARY MEMBER SHOULD KNOW

A medical auxiliary serves the medical profession and through it the public. Such service is satisfactory, because it is unselfish. An auxiliary is always organized with the permission of the medical society and should have an advisor or Advisory Committee to direct it. The auxiliary should make an annual report to its society and undertake no new project without approval.

The principal functions of an auxiliary are: health education, public relations, legislation (reserve force), philanthropy, social.

The laity requires education, but it should be given through the medical profession, so there may be rational control of what the public thinks and does in health activities. Most important objectives of an auxiliary are to direct public thinking and actions in channels the medical profession desires and to extend authentic information on health. We support an organization only when we are a member and understand the tasks and objectives and how to accomplish them. An auxiliary member, therefore, should attend as many meetings as possible, so she may:

1. Understand the purpose and objectives of her auxiliary.
2. Receive the particular charge given by local, state, and national.
3. Receive instruction in how to fulfill that charge.
4. Become informed gradually about:
 - (a) Personal and community hygiene.
 - (b) Administration of local, state, and national health.
 - (c) Medical and health laws, local, state, and national.
 - (d) The health of her community.
 - (e) Communicable diseases; their prevention and control.
 - (f) Her health in relation to her community.
 - (g) General problems of health all should know.
 - (h) Approved educational material; where to obtain it.
 - (i) The development of the medical arts.
 - (j) Why the A.M.A. urges the promotion of *Hygeia*; how done.
 - (k) What legislation the medical society sponsors; why; how the auxiliary acts as a reserve force; what the individual may do.
 - (l) Philanthropic work related to the medical profession; service by her auxiliary; what her auxiliary is doing; why.
 - (m) What lay organizations are doing in her community in health.

The busy wife is an asset to the auxiliary, if she is an INFORMED MEMBER, because she has many opportunities to carry the aims and decisions of the medical profession and keep health leadership where it belongs—with the profession. As a member, she may speak with authority, receive respect and attention that will be missing as an unattached doctor's wife. It is not necessary to partake of every phase of auxiliary work to be a good member, only

what one can do. She should know when to keep quiet, when to report to advisors, when to answer and what to say.

If for no reason but to assemble regularly and study the history of the medical arts and the medical heroes, an auxiliary would be worthwhile, because it would give wives an understanding of the supreme unselfishness and the greatness of the profession.

The time has come when the auxiliary has so proved its worth that the question is not, "Are you an auxiliary member?" but "Why are you not a member?"

Mrs. J. Bomar White
The Bulletin (March) 1943

DOCTOR'S WIFE HAS HER OWN TEN COMMANDMENTS

*(Taken from the Illinois Medical Journal,
August, 1940)*

- She must not know the meaning of the word "jealous."
- She must never gossip.
- She must run a cafeteria, serving meals at all hours for her husband.
- She must be—like Caesar's wife—above reproach.
- She must have self-reliance and self-control.
- She must be able to think quickly and sanely in emergencies.
- She must be a diplomat, see all, hear all, say a lot, yet say nothing.
- She must learn to bear stoically, and without complaint, disappointments in her personal plans.
- She must be a good mother and father, because doctors are often too busy to discipline their own children.
- She must be a good "doctor" because doctors never take time to doctor themselves.

—Author Unknown,
Wichita Medical Bulletin.

OUR ANSWER

In reply to the resolution in opposition to political medicine, adopted by the Society last May, a copy of which was submitted to the President of the United States, the following form letter bearing the signature print of the Federal Security Agency Administrator, has been received. Believe it or NOT . . . but read it . . . and get busy on those pamphlets!

"This will acknowledge your recent communication concerning the Nation's health. Many comments are received by the President and by the Federal Security Agency which indicate wide interest in the President's health proposals, including national health insurance.

"National health insurance is not, as some believe, a proposal for socialized medicine. Socialized medicine or state medicine is a system wherein medical personnel work for the government. Under national health insurance, the freedom of choice of doctor and patient is retained. The personal relationship between a patient and his doctor would continue.

"The voluntary health insurance plans now in

existence do not and cannot provide adequate benefits at low cost to the large number of people who would be included under national health insurance.

"National health insurance would enable many more of us to get preventive care. It would lighten the burden of heavy medical costs during illness by spreading the costs over the years when we are well, working and earning. At present these costs accumulate when people are sick and least able to pay. We believe that national health insurance would result in better medical care for the Nation as a whole.

"Each communication receives individual attention and thoughtful consideration by a staff which studies and suggests ways to improve the Nation's health. Because of the volume of mail, however, it is impossible to reply in a more personal way."

Thank you for your interest.

Sincerely yours,

Oscar R. Ewing, Adm.

Bulletin, Polk County Medical Society (June-July) 1949

ANNUAL REPORTS OF COUNTY AUXILIARIES 1948-1949

Appanoose County Auxiliary has a membership of 10, with an average attendance of six at its monthly meetings. There have been only three meetings since organization, and we are in the process of learning functions and objectives.

Mrs. R. R. Edwards

Butler County Auxiliary has 11 members, with an average attendance of five at its monthly meetings. Programs are educational and provided by the membership. There were eight subscriptions to *Hygeia* and two for *The Bulletin*. We cooperated with every phase of the recommended state program, and we have found that the Auxiliary stimulates the doctors to attend their meetings.

Mrs. H. G. MacLeod

Cass County Auxiliary has a membership of 9, with an average attendance of four at the two meetings held per year. At one of these meetings members sewed for the hospital. We have been effectual in seeing that health programs were used in study clubs. We wrote to the congressmen opposing compulsory health insurance. We placed *Hygeia* in the hospital waiting room. There were three subscriptions to *Hygeia*. We conformed to the state program in every way.

Mrs. M. T. Petersen

Dallas-Guthrie Auxiliary has a membership of 28, with an average attendance of 12 at its quarterly meetings. The programs are educational. This year there were two outside speakers. We had 50 subscriptions to *Hygeia* and 8 for *The Bulletin*. We fulfilled the state objectives in every way and laid stress on display of books and magazines having to do with health and medicine in all libraries in both counties. From the social standpoint, we enjoyed three picnics and two parties.

Mrs. C. R. Osborn

Delaware County Auxiliary has seven members who attend the monthly meetings. The programs are educational, with an occasional outside speaker or a film. We participated in the organization of a preschool round-up program. We have performed various activities for the county hospital and also sent letters opposing compulsory health insurance to all service and study clubs in the county. We have taken our part in the state program and have three subscriptions to *Hygeia* and seven for *The Bulletin*.

Mrs. Paul Stephen

Fayette County Auxiliary was organized by Mrs. Felter in February and has had only one meeting. There are 17 members, and we hope to increase the membership in the near future.

Mrs. M. G. Beddoes

Madison County Auxiliary has a membership of six, with an average attendance of four at the one or two meetings held per year. We have two subscriptions to *The Bulletin* and have made every effort to cooperate with the state program.

Mrs. J. F. Veltman

Polk County Auxiliary has an average attendance of 60 at its quarterly meetings. Its programs are educational and usually handled by members. We have 48 subscriptions to *Hygeia*, and through our influence *Hygeia* is found in all junior and senior high schools in the city. We have six subscriptions to *The Bulletin*. We enjoy an annual party with the doctors. We have served once again as hostesses to the annual meeting of the State Auxiliary. We have cooperated with all phases of the state program. Our outlet sale of articles made by the handicapped, which was held at Younkers, was highly successful. We did a thorough job of circularizing leaflets opposing socialized medicine in as many factories and stores as possible.

Mrs. J. E. Dyson

Woodbury County Auxiliary has a membership of 100, with an average attendance of 40. Meetings are educational and social. There were four outside speakers this year. We have added 17 new subscriptions to *Hygeia*. A two day outlet sale of articles made by the handicapped netted \$200. A tea and tour at the Wall Street Mission provided a better understanding of work done there. We have cooperated in full with the state program and enjoy a fine association with the Medical Society.

PROGRAM IDEA

Answers by the American Cancer Society to 101 questions on cancer appeared in the April 16 issue of *Collier's*. The article is described by ACS officials as "one of the best statements of facts concerning cancer ever printed in a popular magazine." It has been reprinted in pamphlet form and is available on request at the state office of the Iowa division, 117½ North Federal Avenue, Mason City.

SOCIETY PROCEEDINGS

MEETINGS

Sixth Councilor District

The Black Hawk County Medical Society was host to a meeting of the Sixth Councilor District, Iowa State Medical Society, at Black's Tea Room in Waterloo, August 16. State officers, including Dr. Nathaniel G. Alcock, president, were present, and Dr. James C. Hill, of Newton, served as chairman. Speakers were Dr. Ransom D. Bernard, of Clarion, whose subject was national medical legislation, and Mr. I. W. Myers, of Des Moines, state medical legislation.

Ninth Councilor District

The annual summer meeting of the Ninth Councilor District, Iowa State Medical Society, was held August 10 at the Albia Country Club. Following dinner, state officers and the physicians participated in an informal discussion of the national education campaign, national and state legislation, and other community problems.

Tenth Councilor District

A roundtable discussion of medical problems, including socialized medicine, was held at a dinner meeting July 26 of the Tenth Councilor District, Iowa State Medical Society, at the Crestmoor Golf Club in Creston. Speakers included Donald L. Taylor and Dr. Fred Sternagel of Des Moines, Dr. Ben T. Whitaker of Boone, Dr. Gerald V. Caughlan of Council Bluffs, and Dr. Ernest E. Shaw of Indianola. Dr. James G. Macrae presided.

Iowa and Illinois Central District Medical Association

The fall meeting of the Iowa and Illinois Central District Medical Association will be held at the Watch Tower Inn, Blackhawk State Park, Rock Island, Illinois, on Wednesday, September 28. The program will open at 4:00 p.m. with a motion picture in color with sound, "Gelfoam in Hemostasis of Surgery." At 5:00 p.m. Danely Slaughter, M.D., of Chicago, assistant professor of surgery at the University of Illinois College of Medicine and director of the Tumor Clinic at Research Hospital, will speak on "Recent Advances in the Therapy of Cancer." Following a 6:30 dinner, Walter L. Palmer, M.D., University of Chicago (Ill.) Clinics, will speak on "The Problems of Peptic Ulcer."

Linn County

The Linn County Medical Society will meet Friday, October 14. Dr. A. A. Weech, professor of pediatrics, University of Cincinnati, will speak on the subject "Paving the Way for Accepting the Inevitable."

Pocahontas County

At the July 26 meeting of the Pocahontas County Medical Society, a resolution opposing compulsory health insurance was passed.

Upper Des Moines Valley

The Upper Des Moines Valley Medical Society met at the Inn on Lake Okoboji on August 4. Scientific papers were presented at the afternoon meeting by Dr. Russell Meyers, head of the neuro-surgical department of University Hospitals; Dr. Beatrice E. Tucker, of Chicago, formerly with the Chicago Lying-In Hospital; Dr. Julian D. Boyd, professor of nutrition in pediatrics, University Hospitals; Dr. William V. Leary, department of chest diseases, Mayo Clinic, Rochester, Minnesota; and Dr. Nathaniel G. Alcock, department of urology, University Hospitals. Speakers at the banquet were Donald L. Taylor, Des Moines, field secretary of the State Society, and Dr. Robert L. Parker, of Des Moines.

PERSONALS

Dr. John Ackerman, of Milwaukee, Wis., has become associated with Dr. Werner P. Pelz at Nashua. Dr. Ackerman is a graduate of the Marquette University School of Medicine, Milwaukee, Wis.

Dr. Eerko S. Aeilts, of Sibley, gave an address to the local Rotary Club on socialized medicine.

Dr. Hoyt H. Allen, formerly of Perry, has become associated in Fort Dodge with Drs. Wilbur C. Thatcher and Paul L. Stitt, and will specialize in general surgery. A graduate of the SUI College of Medicine, Dr. Allen interned at the Los Angeles (Calif.) County Hospital and served two years in the army medical corps at Chanute Field Hospital, Ill., where he specialized in surgery.

Dr. Fred A. Bowman, of Leon, discussed mental and nervous diseases at the regular luncheon meeting of the Rotary Club there on July 18.

Dr. Richard T. Day, of Brighton, has formed a partnership with Dr. F. L. Seiberts in Hampton. Dr. Day has recently been discharged from the army, after having spent the last 15 months on the staff in the Oliver General Hospital, at Augusta, Ga.

Dr. J. Duffy, of Bussey, has become associated with Dr. Dean C. Snyder in DeWitt. Dr. Duffy has spent a year with the army medical corps in the state of Washington, practicing general medicine for service families.

Dr. James E. Dyson, of Des Moines, was the guest speaker at a meeting of the Iowa Lutheran Hospital Society August 11. His subject was "Polio."

Dr. Stephen Fox has opened offices in Ottumwa for the practice of orthopedic surgery. A graduate of Tulane University School of Medicine, New Orleans, Dr. Fox spent a year at Children's Mercy Hospital at Kansas City, Mo., and then took postgraduate training in orthopedic surgery at the University of Kansas medical center, Kansas City, Kan. He is a member of the American Board of Orthopedic Surgery.

Dr. Paul V. Hart, of Des Moines, has become associated with Dr. Thomas J. Egan in the Medical-Surgical Clinic in Bancroft. Dr. Hart, who is a graduate of Creighton University School of Medicine, Omaha, was discharged from the navy in July, after serving for six years. Dr. Hart replaces Dr. Raymond R. Zukaitis, who has resigned after 18 months in Bancroft to accept an appointment as rotating resident physician at St. Mary's Hospital in Duluth, Minn.

Dr. Louis N. Hungerford has become associated with Dr. James T. Worrell in Keosauqua, closing his offices in Fairfield early in August.

Dr. Herbert H. Kersten, who has been with the surgery department at University Hospitals in Iowa City for the past three years, has become associated with his father, Dr. Ernest M. Kersten, and Dr. Joseph J. Weyer in Fort Dodge. Dr. Kersten was graduated from the SUI College of Medicine in 1943 and served his internship at Roper Hospital, Charleston, S. C., following which he served with the army medical corps in both the Philippines and Japan. He will specialize in general surgery.

Dr. James B. Knipe, of Armstrong, spoke on socialized medicine before the Estherville Kiwanians on July 20.

Dr. Willard G. Kuehn, of Huron, S. D., has become associated with Dr. Hans S. Frenkel in Clarinda. After being graduated from the University of Nebraska Medical School in 1946, Dr. Kuehn served a year's internship at the University of Nebraska Hospitals and later served a residency there and at the Children's Hospitals in Omaha.

Dr. Mark A. R. Kuhn, urologist, has opened offices in Waterloo. A native of Decorah, Dr. Kuhn is a graduate of the SUI College of Medicine and served his internship at Jackson Memorial Hospital, in Miami, Fla., where he has been practicing for the past two years.

Dr. Herbert C. Leiter and Dr. Edward Sibley discussed socialized medicine at a Rotary Club meeting on August 8 at the Martin Hotel in Sioux City.

Dr. Paul Neagle, of Des Moines, has purchased the practice in Calmar of Dr. Galen C. Boller, who leaves September 1 for postgraduate work at the University of Southern California and Los Angeles County Hospital. Dr. Neagle is a graduate of Creighton University School of Medicine, Omaha, Neb., and interned at DePaul Hospital in St. Louis, Mo.

Dr. Richard W. Nicholson, of Superior, Neb., has opened offices in Paton for the practice of medicine. A graduate of Harvard Medical College, Cambridge, Mass., Dr. Nicholson served his internship at University Hospitals in Iowa City. Dr. Nicholson has also served three years in the navy medical corps.

Dr. William R. Owen, who has practiced in Osage for 45 years, has announced his retirement from active practice.

Dr. Eugene C. Penn, of West Des Moines, spoke on the current anti-tuberculosis campaign at the Rotary Club luncheon there on July 25.

Dr. M. Patricia Phelan has opened offices in Altoona for the practice of medicine. Dr. Phelan spent one year at Mercy Hospital, Des Moines, as an intern and another year as resident physician, after being graduated from the Creighton University School of Medicine in 1947.

Dr. C. E. Radcliffe, who has been associated with Dr. John C. Peterson in the Hand Hospital in Hartley for the past three years, has left for Iowa City to take a postgraduate course in dermatology at the University.

Dr. Gerald R. Rausch gave a talk on "Emotions and Feelings—How to Handle Them" to the Inter-professional Men's Club in Sioux City on June 17.

Dr. R. F. Rebal, of Plattsmouth, Neb., has opened offices in Neola for the practice of medicine. A graduate of the University of Nebraska Medical School, Dr. Rebal has been with the army medical corps since 1946, stationed at Fort Knox, Ky.

Dr. James E. Reeder, Jr., spoke to the Cooperative Club in Sioux City on socialized medicine at a luncheon meeting July 15.

Dr. Leonard P. Ristine resigned his position as superintendent of the Mount Pleasant State Hospital, effective July 31, to accept a position as superintendent of the Topeka (Kansas) State Hospital.

Dr. Edward L. Rohlf, Jr., of Waterloo, spoke before the Independence Lions Club at a meeting July 19 on the subject of socialized medicine.

Dr. Jesse L. Saar has become associated in the practice of general surgery with Dr. Carl J. Lohmann of Burlington. Dr. Saar has recently completed his surgical residency at the University Hospitals in Iowa City.

Dr. Howard W. Smith, of Woodward, was honored at a community-wide picnic on July 15. Dr. Smith has been practicing medicine in Woodward for 40 years.

Dr. Donald E. Tyler has become associated with Dr. Edwin J. Gottsch in Shenandoah in the practice of obstetrics, medicine and surgery. Following his graduation from the SUI College of Medicine, Dr. Tyler served his internship at the Toledo (Ohio) General Hospital. He recently completed a residency in the County Charity Hospital, Wichita, Kan.

Dr. Thomas R. Viner has become associated with Dr. W. Norman Doss in Leon. Dr. Viner is a graduate of the University of Nebraska and served his internship at the University of Nebraska Hospital, in Omaha. For the past two years he has served as army transport surgeon at Camp Carson, Colorado Springs, Colo.

Dr. Donald V. Walz, who recently purchased Dr. Leland Reeck's practice in Lytton, has also opened offices in Sac City and will divide his time between the two cities. Dr. Walz was graduated from the SUI College of Medicine in 1947 and served his internship in Cleveland (Ohio) City Hospital. He also took a year's residency at Broadlawns Hospital, Des Moines. Dr. Walz was formerly from LeMars.

Dr. J. L. Wiedemeier has become associated with Dr. Keith E. Arnold in Sioux City. A graduate of Creighton University School of Medicine, Dr. Wiedemeier recently completed his internship at St. Catherine's Hospital in Omaha.

Dr. George White, a native of Madrid, has become associated with Dr. George Mountain in Des Moines. A 1947 graduate of the Creighton University School of Medicine, Dr. White served his internship and a year of residency at Iowa Methodist Hospital, Des Moines.

Dr. William D. Maixner and Dr. Philip D. McIntosh, both graduates of the University of Nebraska College of Medicine, have opened a joint office in Ottumwa. Dr. Maixner, a native of Dwight, Neb., served at the St. Louis (Mo.) City Hospital, and Dr. McIntosh, whose home is in Pilger, Neb., had his hospital training in Omaha.

Drs. Warren C. Zabloudil and Marvin F. Piburn have opened offices together in Hopkinton. Both were graduated from the SUI College of Medicine in 1948. Dr. Zabloudil, from Burlington, served his

internship in Deaconess Hospital, at Spokane, Wash. Dr. Piburn, from Malvern, completed his internship at St. Mary's Hospital, Duluth, Minn.

Dr. Clark H. Millikan, assistant professor of neurology, and Dr. Robert C. Hardin, assistant professor of internal medicine, have announced their resignations from the SUI College of Medicine faculty. Dr. Millikan, who has been a member of the department of neurology since 1941 and an assistant professor since 1947, will become consultant in neurology to the Mayo Clinic, Rochester, Minn., and assistant professor of neurology, Mayo Foundation, in the University of Minnesota Graduate School of Medicine. Dr. Hardin, who became an assistant professor in internal medicine in 1946, has accepted a position as medical director of the American Red Cross blood transfusion program for the Connecticut region.

The department of internal medicine of the SUI College of Medicine has announced the appointment of two new staff members. Dr. James W. Culbertson was appointed director of cardiovascular research and assistant professor of medicine, and Dr. Paul Seebohm was appointed director of the allergy clinic.

Dr. Culbertson, who was graduated from the University of Virginia Medical School in 1940, has served as an instructor of anatomy at the University of Virginia and as an instructor in medicine at the Boston University School of Medicine. In 1948 he received the John Horsley Memorial prize for investigative work in medicine dealing with surgical problems.

Dr. Seebohm, who was graduated from the University of Cincinnati Medical School in 1941, served his internship at University Hospitals in Iowa City. For the past two years he has been working in the allergy clinic at Roosevelt Hospital, New York City.

DEATH NOTICES

Alliband, George Arthur, 74, of Atlantic, who had practiced medicine 45 years, died July 18 at the Atlantic Memorial Hospital. Dr. Alliband had been suffering from a heart ailment for the last two years. Born at Darlington, Pa., Dr. Alliband was graduated from the University of Nebraska College of Medicine in 1904. He opened a practice in Elliot which he held until 1928 when he moved to Atlantic. He was a member of the Cass County and Iowa State Medical Societies.

Blume, Winfred R., 47, of Sioux City, died in a hospital there July 21 of a heart ailment. Born in Emerson, Neb., Dr. Blume, after he was graduated from the University of Nebraska College of Medicine, practiced at Minden, Neb. He moved to South Sioux City in 1935, and in 1943 to Sioux City. He was a member of the Woodbury County and Iowa State Medical Societies.

Cantrell, Carmi M., 54, resident physician in radiology at University Hospitals in Iowa City, died August 2 of a heart ailment after an illness of about eight months. Born in Minier, Ill., Dr. Cantrell was graduated in 1924 from the SUI College of Medicine. He practiced his profession in Lone Tree from 1930 until 1947, when he accepted the position at University Hospitals. He was a member of the

Galloway, Milton Blythe, 68, of Webster City, former Hamilton County coroner for many years, died August 9 at the Hubbard Nursing Home where he had been a patient for three months. He had been in failing health for the past several years. He was born in Wakeeney, Kan., and was graduated from Rush Medical College, Chicago. He practiced for five years in South English, coming to Webster City in 1916. He was a member of the Hamilton County and Iowa State Medical Societies.

Marek, Joseph Edward, 64, Mason City physician and surgeon for 31 years, died August 10 at a local hospital following an illness of seven years. Born in Wisconsin, Dr. Marek was graduated from the University of Georgia School of Medicine in 1908, coming to Mason City in 1918. He was a life member of the Cerro Gordo County and Iowa State Medical Societies.

Mathias, John Perry, 80, of Mediapolis, died August 3 in a Kearney, Neb., hospital, from injuries received in an automobile accident. Dr. Mathias was born in Bentley, Ill., and was graduated from Keokuk Medical College in 1902. He practiced in Yarmouth until moving to Mediapolis in 1912. He was a life member of the Des Moines County and Iowa State Medical Societies.

Moore, Gage C., 43, of Ottumwa, died July 17 of a sudden heart attack. Born in Rock Island, Ill., Dr. Moore was graduated from the SUI College of Medicine in 1934. After interning at St. Louis (Mo.) City Hospital, he established a practice in Ottumwa in 1936. He served three and one-half years with the army medical corps in World War II, returning from the service in ill health. He was a member of the Wapello County and Iowa State Medical Societies.

Richards, Frank O., 80, of Santa Ana, Calif., died there June 28. A native of West Branch, Dr. Richards had practiced at Winterset, specializing in diseases of the eye, ear, nose and throat for a number of years and was a former member of the Madison County and Iowa State Medical Societies.

Sauerbry, Frank C., 72, of Arlington, died July 25 after a long illness. Dr. Sauerbry had practiced medicine in Greeley and Basset before coming to Arlington 33 years ago. He was a former member of the Fayette County and State Medical Societies.

NEWS NOTES

(Continued from page 451)

The doctors of Boone, Iowa, were the hosts to the physicians attending the fifth district meeting held Thursday evening, August 11, at the Holst Hotel. There was an attendance of about 80 doctors and their wives. Dr. Edward F. Beech, councilor for the fifth district, called the meeting to order and then turned the program over to Dr. Nathaniel G. Alcock, president, Iowa State Medical Society, who delivered a short address and then introduced the following speakers: President-Elect Thomas F. Thornton, of Waterloo; Dr. R. D. Bernard, of Clarion, chairman, Sub-Committee on National Legislation; Mrs. Kay Shepherd, of Des Moines, co-chairman, Public Relations Committee of the Woman's Auxiliary; Dr. Ben T. Whitaker, of Boone, trustee; Dr. C. A. Nicoll, of Panora, chairman, Sub-Committee on General Practice; Dr. A. B. Phillips, of Des Moines, secretary; Mr. Don L. Taylor, field secretary.

Drs. Alcock and Thornton placed particular emphasis on the activities of the individual county society and physician. They stressed the need for more individual performance and asked that all doctors take time from their practice to keep abreast of the current events related to the practice of medicine. Dr. Thornton believes each physician should spend a portion of his time visiting with each patient about compulsory health insurance. He believes the doctors can defeat this drive for compulsion by taking time to explain some of the reasons for higher costs of medical care and why it is that a doctor is not readily available on a moment's notice to make a house call in the middle of the night. Dr. Thornton stated, "We must get behind the good voluntary insurance plans and push them to their fullest extent." He suggested that each physician advise his patients to know the benefits of an insurance policy before making a purchase.

Dr. Bernard gave a most complete picture of the legislative picture in Washington.

Subjects discussed by the remaining speakers were the national education campaign of the A.M.A., state legislation, general practice, and other local problems. Dr. Alcock closed the meeting by summarizing the previous speeches.

Other meetings were held:

Sixth District—Black's Tea Room, Waterloo, Iowa, August 11, 6:30 p. m.

Fourth District—Methodist Church, Ida Grove, August 18, 6:30 p. m.

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DIAGNOSIS OF PULMONARY DISEASE

Arthur M. Olsen, M.D., Rochester, Minn.

In recent years great advances have been made in the treatment of nearly every known disease of the lung. Thoracotomy is no longer considered to be a hazardous procedure. Thoracic surgeons have perfected their technics and devised new operative procedures. The indications for surgical intervention in various thoracic diseases have been extended. Surgical treatment is commonly employed for pulmonary and mediastinal neoplasms, for suppurative disease of the lung and pleural space, and for some types of pulmonary tuberculosis. The introduction of sulfonamide drugs and antibiotics has revolutionized the treatment of pneumonia and other infectious diseases of the lung. In particular, streptomycin has proved to be a most valuable adjunct to the treatment of tuberculosis. Recently, aureomycin has been introduced and appears to have a wide range of usefulness.

Presented at the Ninety-Eighth Annual Session, Iowa State Medical Society, Des Moines, April 18-21, 1949.

In order to take full advantage of these improvements in the management of thoracic diseases, early and accurate diagnosis is imperative. No longer may we be satisfied with a presumptive diagnosis; definite pathologic or bacteriologic diagnosis is essential. In this paper I shall review the present methods of diagnosis in pulmonary disease. It is often necessary to correlate the results of several procedures in order to arrive at the correct diagnosis. Early diagnosis usually depends upon the alertness of the general practitioner and the diagnostic facilities available to him. Some of the refinements in the diagnosis of thoracic disease are available to the general practitioner. Others require the services of a specialist. Collaboration between the two is often quite necessary.

History and Physical Examination

The story of the patient and a complete examination are always important in the diagnosis of pulmonary disease. In acute pulmonary disease, symptoms are usually striking and physical findings plentiful. However, in chronic disease of

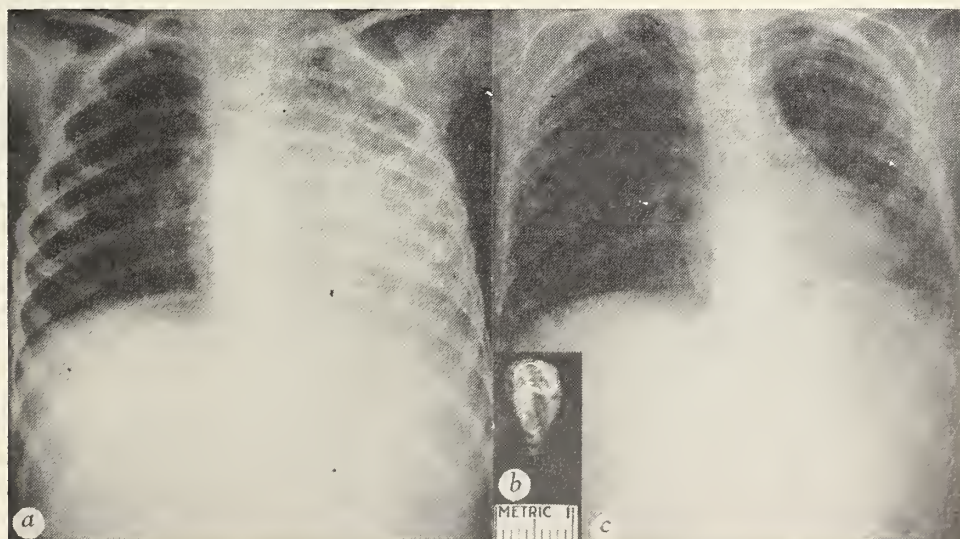


Fig. 1. Boy, aged 4 years. *a.* Before bronchoscopy. *b.* Twenty-four days later. *c.* Foreign body. The boy had had a febrile illness with productive cough for two months prior to admission. He had responded temporarily to therapy with sulfonamides and penicillin. A foreign body (grain of corn) was removed from the left bronchus. The so-called unresolved pneumonia cleared up after removal of the foreign body.

the lung the presence of serious symptoms or definite findings often means that the disease process is well advanced. Hence, ways of detecting pulmonary disease in the apparently well individual must be found. Chronic cough, dyspnea or wheeze always deserve investigation. Hemoptysis, however slight, is important. Patients who have had pneumonia or other acute respiratory illnesses should be followed to complete resolution. In other words, follow-up examinations, including roentgenographic examination of the thorax, are advisable for all patients who have had acute pulmonary diseases. It is well to point out that the use of sulfonamides and antibiotics may mask serious complications of pneumonia or postoperative complications (Fig. 1). In fact, these drugs may disguise the symptoms of bronchial obstruction due to bronchial tumors or foreign bodies. The indiscriminate use of streptomycin in pneumonia may temporarily suppress the manifestations of tuberculous pneumonia.

Roentgenography of the Thorax

The roentgenographic and fluoroscopic examinations of the thorax are certainly the most valuable methods of detecting pulmonary disease early in its course. In the practice of many physicians these procedures are becoming a routine part of general examinations. Roentgenologic surveys of the general population or industrial groups are of great value in the detection of early pulmonary disease. With the aid of the general practitioner, asymptomatic, or almost asymptomatic, pulmonary lesions are being detected. Often the physician finds it desirable to send his roentgenograms or his patient to the roentgenologist, internist or specialist in thoracic diseases.

As the general practitioner increases his experience with the fluoroscope or x-ray equipment, he learns to recognize abnormal shadows in the thorax. He may see solitary or multiple nodules, infiltrations, cavities or cysts, consolidations, atelectasis, tumors and so forth. Often, with the aid of the roentgenologist, he may be able to determine the significance of such shadows. The roentgenologist would be the first to admit that an accurate diagnosis of pulmonary lesions is often impossible with the roentgenogram alone. Additional studies are usually necessary.

Special roentgenographic techniques are often helpful in the evaluation of pulmonary lesions. Stereoscopic roentgenograms or ones made with the Bucky diaphragm may give additional information. Roentgenograms made in the lateral, oblique or lordotic positions, or postero-anterior roentgenograms made with the patient in the lateral decubitus position may be indicated. The latter type of technic may be helpful to demon-

strate fluid in the pleural space or to indicate fluid levels in pulmonary cavities. Serial section roentgenograms (tomograms) may be necessary to demonstrate cavities when the pulmonary field is obscured by pleural thickening or changes incident to thoracoplasty, and such roentgenograms may demonstrate lesions in the bronchial tree.

Bronchography is particularly useful in localizing the bronchial changes in suppurative bronchiectasis. A "mapping" of the bronchial tree is essential before a surgeon can consider removal of portions of the lung for bronchiectasis. Also, the instillation of iodized oil is of value in patients who have had pulmonary hemorrhage of obscure origin. Angiocardiography is a relatively new method of diagnosis, which employs the use of a contrast medium in the heart, great vessels and pulmonary circulation. It has its greatest use in the demonstration of cardiovascular abnormalities but is also of help in separating thoracic tumors from the great vessels.

Sputum Examinations

The examination of sputum for tubercle bacilli is a procedure that is available to every physician through his state health department. Such sputum

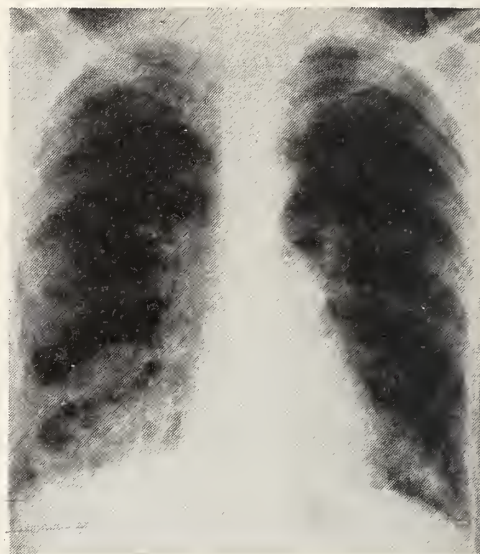


Fig. 2. Man, aged 32 years, who had a history of chronic productive cough with foul sputum and hemoptysis for 20 years. There was a definite clinical picture of bronchiectasis. However, microscopic examination and culture of the sputum revealed tubercle bacilli.

examinations should be carried out on every patient who has a chronic productive cough (Fig. 2). If the roentgenogram of the thorax shows a lesion suggestive of tuberculosis, sputum should be cultured for acid-fast bacilli, or cultures should be made from the fasting gastric contents. It should be borne in mind that a single negative result is not conclusive. Even failure to find tubercle bacilli after several sputum examinations does not ex-

clude tuberculosis. When sputum is not available it is recommended that at least three separate specimens of fasting gastric contents be cultured for tubercle bacilli. Present day cultural methods are quite satisfactory, and it is rarely advisable to inoculate guinea pigs with either sputum or gastric contents.

Since the introduction of sulfonamide and antibiotic therapy, the practice of typing pneumococci in pneumonia has been largely discontinued. However, it is wise to do acid-fast stains and Gram stains on sputum in cases of pneumonia. Cultures of sputum of patients with chronic productive cough are desirable. The finding of gram-negative bacteria such as the *Hemophilus influenzae*, *Klebsiella pneumoniae*, *Aerobacter aerogenes* or *Escherichia coli* may prove to be significant. These bacteria usually respond to streptomycin but not to penicillin therapy.

The isolation of malignant cells from the sputum or bronchial secretions of patients with bronchogenic carcinoma is a new and exciting chapter in the diagnosis of pulmonary disease. The value of this procedure in the early detection of cancer of the bronchus has been amply demonstrated. In approximately 75 per cent of patients with bronchogenic carcinoma, cancer cells can be identified in the sputum. The chief drawback to this method of diagnosis is that there are relatively few pathologists who have the training or experience necessary to prepare the material properly or to recognize the cells. Occasionally false positives are encountered. It is certain that the cytologic examination of sputum will greatly increase the speed and accuracy of diagnosis in bronchogenic cancer. Inasmuch as the material can be collected in bottles containing 95 per cent alcohol and can be preserved for some time, the procedure is one that should ultimately be available to the general practitioner. It should be emphasized that the test is of value only when the results are positive. A negative result does not exclude cancer of the lung.

Skin Tests

Every physician is familiar with the tuberculin test. It must be borne in mind that in adults a negative reaction is more significant than a positive reaction. A negative tuberculin reaction practically excludes tuberculosis as a cause of a pulmonary lesion. As tuberculosis becomes less prevalent in the general population, the tuberculin test becomes more important. In the evaluation of a thoracic diagnostic problem a positive tuberculin reaction is of greater significance in Iowa than in New York City. It is becoming increasingly rare to find positive reactions in children. Tuberculin surveys in preadolescent school chil-

dren still have their value in helping to detect sources of contagion. Tuberculosis surveys of high school students are most valuable. However, with each generation, more people reach adult life with negative tuberculin reactions.

Skin tests for histoplasmosis and coccidioidomycosis are in use today but are not generally available to the general practitioner. Clinical cases of histoplasmosis are still rare, but positive results with histoplasmin tests are not uncommon in individuals with extensive pulmonary calcification. Positive reactions to the coccidioidin test are usually found in individuals who have lived in the Southwest or in the San Joaquin Valley of California. Since World War II we have been seeing an increasing number of cases of pulmonary coccidioidomycosis at the Mayo Clinic.

Bronchoscopy

Bronchoscopy is a most important method of diagnosis of thoracic disease. With the bronchoscope it is possible to demonstrate obstructing or ulcerating lesions of the trachea and major bronchi. Through the bronchoscope it is possible to remove foreign bodies, take specimens of tissue for microscopic study, aspirate secretions for cytologic study and fulgurate bronchial adenomas. In the evaluation of pulmonary disease it is often important to exclude bronchial obstruction by bronchoscopic examination.

The limitations of bronchoscopy should be emphasized. Much of the bronchial tree cannot be visualized. Not more than 60 per cent of bronchial tumors can be seen through the bronchoscope; however, bronchial secretions for cytologic study can be obtained by aspiration or bronchial lavage.

Exploration of the Thorax

The principal methods of diagnosis of pulmonary disease have been reviewed. It should be mentioned that in some cases the diagnosis becomes obvious after a period of observation with repeated roentgenograms of the thorax. At times, serial roentgenograms at 60 day intervals may be the only way to differentiate between active and inactive tuberculous lesions. Similar or shorter periods of observation may serve to differentiate pneumonitis from pulmonary infiltrations of more serious import. Frequently, the time intervals involved may be utilized to obtain reports of cultures for acid-fast organisms or fungi. A correlation of all available methods of diagnosis is often essential to determine the nature of a pulmonary lesion with any certainty.

When the possibility of neoplastic disease of the thorax is included in differential diagnosis, it is unwise to observe the patient for any period

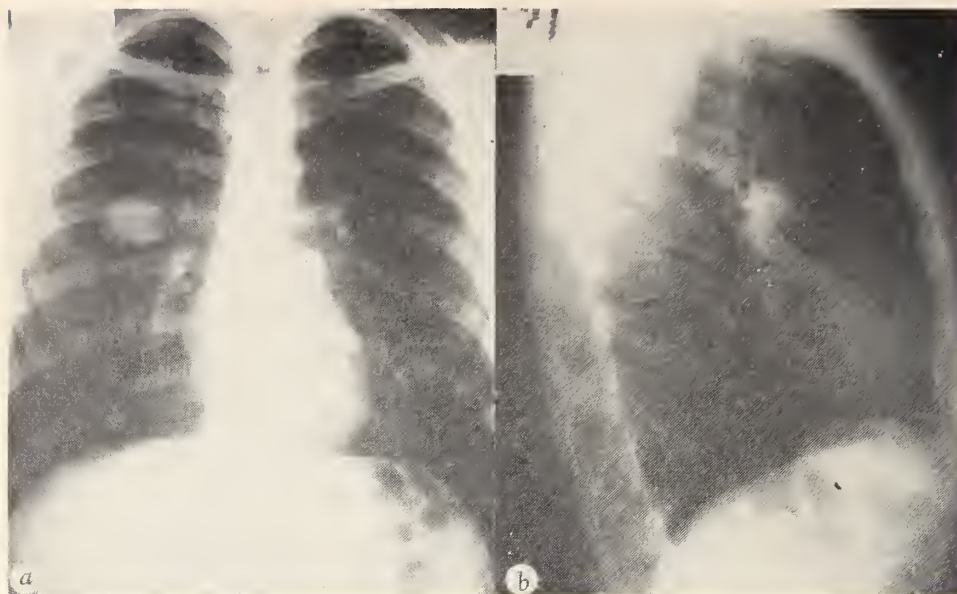


Fig. 3. Youth, aged 17 years, with an asymptomatic pulmonary tumor discovered on routine roentgenologic examination for military service. Pulmonary resection was performed. The tumor proved to be a grade 2 adenocarcinoma. *a*. Anteroposterior view. *b*. Lateral view.

of time (Fig. 3). Under such circumstances exploratory thoracotomy is justified. Such explorations are carried out most commonly when bronchogenic carcinoma is suspected but not proved. Although cytologic examinations of sputum and bronchial secretions have greatly facilitated the diagnosis of bronchial cancer, these cell studies are likely to give negative results in the presence of small malignant lesions. According to a recent survey of 374 operations on the lung, 114 patients underwent exploration without a definite preoperative diagnosis. Sixty-five per cent of these 114 pulmonary lesions proved to be cancer. Now that adequate methods are available for the isolation of malignant cells in bronchial secretions, a greater percentage of correct diagnosis of bronchogenic carcinoma prior to operation can be anticipated. However, a sizable proportion of pulmonary lesions will continue to be explored without a definite diagnosis. Although the risk of thoracic exploration is low, it should be pointed out that the surgeon is often obliged to remove a lobe before a tissue diagnosis can be made.

Physicians must continue to utilize every available method of diagnosis before resorting to surgical treatment. It must also be borne in mind that the presence of fluid in the pleural space usually means that a pulmonary tumor is malignant and inoperable. One should look for other signs of inoperability, such as the presence of metastatic nodes, involvement of the liver or rectal shelf, and paralysis of the left vocal cord or one side of the diaphragm. An effort should always be made to spare the patient a useless operative procedure.

Unquestionably, great advances have been made in the diagnosis as well as the treatment of pulmonary diseases. All physicians must continue their efforts to detect diseases of the lung early in their course in order that effective treatment can be instituted. The successful management of these diseases requires the collaboration of the general practitioner, internist, radiologist, bronchoscopist, pathologist, bacteriologist and thoracic surgeon. Through their combined efforts, further progress in the therapy of thoracic disease can be anticipated.

DIAGNOSTIC DIFFICULTIES IN CARCINOMA OF THE LUNG

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Only 40 years ago primary cancer of the lung was considered a rather rare disease. Today, with better diagnostic methods and an actual increase in the incidence of the disease, bronchogenic carcinoma has become the most frequent visceral cancer in men. Graham, in 1933, performed the first successful pulmonary resection for cancer of the lung and so provided a curative mode of treatment. The frequency of the disease, then, and the fact that it can be cured if recognized and operated upon early should keep us vitally interested in the diagnosis of this condition.

During the past two or three years reports on large series of cases have been published. These will be summarized, so that we may have a more concise knowledge of the problem. Ochsner, De-

Bakey and Dixon,¹ Rienhoff,² Overholt and Schmidt,³ Graham,⁴ and Brock⁵ have reported their experience with 2,391 cases of bronchogenic carcinoma. Only 41 per cent of these patients, they felt, warranted exploration. The others were considered inoperable because of the extent of the disease or the general condition of the patient. Of this 41 per cent that were explored, slightly over one-half (or 22 per cent of the total) were found to be resectable. But of this 22 per cent that were resectable, more than 70 per cent had at least lymph gland extension of their disease. Thus, slightly less than 7 per cent of the entire group were operated upon at a time when the tumor was confined to the lung itself. These figures demonstrate the greatest hindrance to our cure of patients with cancer of the lung. It lies in our inability, up to this time at least, to make an early diagnosis when the lesion has not extended beyond the lung itself. The hope for patients operated upon when the disease is confined to the lung itself can be seen in a summary of the patients in this series, 42 per cent of whom were alive and well five years after their resections. This group, however, is small. Only by enlarging this group of less than 7 per cent can we hope to improve our results in the treatment of bronchogenic carcinoma.

The diagnosis of cancer of the lung is a difficult one—difficult for two reasons. First, the disease is not suspected. Second, when it is suspected, positive diagnosis is not easy because the symptoms are not particularly characteristic, and x-rays of the chest are not in themselves absolutely diagnostic. The most common early symptom of bronchogenic carcinoma is cough. This symptom occurs in a high percentage of cases. In the early stages of the disease it is nonproductive, a tickling or dry hacking cough. Close questioning may reveal that, although the patient has had a chronic cough, its character has changed somewhat. The next most common symptom is hemoptysis, but unfortunately it may not be an early symptom. Hemoptysis is usually noted by the patient and disturbs him sufficiently to make him seek medical advice. The hemoptysis is seldom massive but usually only slight streaking. Pain, also, unfortunately is not an early symptom, although a peculiar slight discomfort in the chest may be a fairly early symptom of carcinoma. Loss of weight is never an early symptom but unfortunately is seen in a large proportion of patients with bronchogenic carcinoma when they finally reach a thoracic surgeon.

Having only these rather vague symptoms upon which to base a suspicion of bronchogenic carcinoma, how may we hope to arrive at an earlier

diagnosis? Because of the frequency of the disease in men (in fact, it is predominantly a disease of men, being from six to ten times as common in men as in women), we must suspect carcinoma of the lung in a patient who develops a cough or in whom the type of cough changes, and certainly in one who has even the slightest hemoptysis.

Having become suspicious that the patient may have carcinoma, what methods of diagnosis shall we institute to enable us immediately to arrive at a positive diagnosis?

First, an x-ray examination of the chest should be done. To understand the different features in the x-ray picture compatible with a diagnosis of cancer of the lung, it will be well for us to consider the positions and modes of growth of the lung tumor. These may be divided into three general groups. First, the tumors growing within the lumen of the main bronchi will show varying degrees of obstruction of the bronchial segments distal to them. The tumor itself will not be visible, but the secondary changes in the lung will be. The earliest result of this bronchial obstruction may be seen as a localized area of emphysema. Unfortunately, this rather short phase of the partial obstruction phenomenon is seldom recognized. Subsequent to this period of emphysema varying degrees of atelectasis occur, and these are the changes seen in the x-ray picture. Second, the tumor may originate in the wall of a smaller bronchus near the heart, and its growth may continue for some time without actually blocking a main bronchus. Here, increased density will be seen in the hilum without noticeable atelectasis in the lung. As the growth increases in size, the bronchus is constricted from without and eventually is blocked when, of course, atelectasis becomes apparent. Tumors in this position, however, may well be nonresectable by the time atelectasis of the lung occurs. The third position of the tumor is in the periphery of the lung, and this type produces the least early symptoms. Because it is so peripheral, cough may not even be present. A slight discomfort referable to the pleura is occasionally the only symptom that can be elicited. These tumors, if they are found early, are usually found as a result of chance or periodic x-ray examinations of the chest.

Because increased density at the hilum, varying degrees of atelectasis, and peripheral infiltration are seen in several other diseases of the chest, the x-ray picture is not necessarily diagnostic but only suggestive. Bronchogenic carcinoma at times resembles the x-ray picture of virus pneumonia, lung abscess, tuberculosis, tuberculomas, mediastinal tumors and bronchiectasis. Only by suspect-

ing carcinoma and immediately seeking additional diagnostic aids can we hope to make an early diagnosis. When carcinoma of the lung is suspected from x-ray examination, bronchoscopic examination should be done. If the lesion is in the major bronchi, and particularly in the lower or middle lobe bronchi, a diagnosis can be made in a high percentage of cases. Unfortunately, however, the upper lobes are more frequently the site of carcinoma than are the lower and middle lobes, and here it may not be possible to see far enough into the upper lobe bronchi to make a positive diagnosis. We find, therefore, that only in from 40 to 50 per cent of patients with carcinoma of the lung can we make a positive diagnosis from bronchoscopic biopsy. Even in the upper lobes, however, bronchoscopic examination may make one suspicious of the presence of a tumor by secretions coming from the upper lobe orifice and by alterations in position, size and contour of the upper lobe orifice. It will be realized that additional diagnostic methods are necessary.

In the past few years diagnosis of carcinoma by examination of secretions has attained a real place in our diagnostic methods. Repeated examinations of sputa, of material aspirated during bronchoscopy, or of washings of the bronchi obtained during bronchoscopy when secretions were minimal, have yielded many positive findings. It is safe to say that, as the experience of the pathologist increases, his accuracy of diagnosis will increase immensely. Recent reports from McDonald at the Mayo Clinic show 97 per cent accurate diagnosis from this method of examination.

Finally, all these methods may fail in arriving at a positive diagnosis of carcinoma. If the x-ray examination is suspicious, and one has ruled out as well as possible the presence of other pulmonary disease, exploratory thoracotomy should be done. With our present methods of anesthesia and of preoperative and postoperative care, thoracotomy is a safe procedure and should be resorted to far more frequently than it has been, in an attempt to make earlier diagnosis and to permit earlier resections of bronchogenic carcinoma. It may be impossible to make a positive diagnosis of a pulmonary lesion after opening the chest and examining the lung. Virtually all these lesions in which one suspects carcinoma, however, should be treated by resection. When a positive diagnosis cannot be made, and biopsy of deep lung tissue seems inadvisable, a segmental or lobe resection should be done. The lesion can then be examined grossly and microscopically. If it is benign, the resection has been completed. If it is malignant, a pneumonectomy can then be done.

The operative mortality rate for pulmonary resection has been diminishing yearly. In the early days the rate was rather prohibitive, but in the last few years it is being brought down to reasonable proportions, being under 20 per cent in almost all experienced hands—and in some surgeons' hands it has dropped to 5 per cent.

The present results of our treatment of bronchogenic carcinoma are not good. The diagnosis in the early stages of the disease is difficult. Too frequently the diagnosis is not made until resection is impossible or, if possible, is a palliative one since the disease has extended beyond the lung. The operative death rate is reaching reasonable proportions and can be still further reduced by refinements in operative technic. The mortality, however, will never be negligible, since in this age group there will be an appreciable amount of cardiovascular disease. Since bronchogenic carcinoma is 100 per cent fatal without resection, and the results from radiation therapy are so poor, it is incumbent upon us to make every effort to recognize the disease early. We can only accomplish this if we are suspicious of all pulmonary lesions in the 40 to 70 year age group in men, and carry out precise diagnostic methods immediately rather than waiting one or two or three months to observe the progress of the lesion. Possibly, then, in the future we will be able to report a somewhat brighter picture.

BIBLIOGRAPHY

1. Ochsner, A.; DeBakey, M. E.; and Dixon, L.: Primary pulmonary malignancy treated by resection; analysis of 129 cases. *Ann.Surg.*, cxxv:522-540 (May) 1947.
2. Rienhoff, W. F., Jr.: Present status of surgical treatment of carcinoma of lung. *Ann.Surg.*, cxxv:541-564 (May) 1947.
3. Overholt, R. H.; and Schmidt, I. C.: Survival in primary carcinoma of lung. *New England J.Med.*, cclx:491-497 (March 31) 1949.
4. Graham, E. A.: Bronchiogenic carcinoma. *Wisconsin M.J.*, xlviii:232-234 (March) 1949.
5. Brock, R. C.: Bronchial carcinoma. *Brit.M.J.*, ii:737-739 (Oct. 23) 1948.
6. Woolner, L. B.; and McDonald, J. R.: Diagnosis of carcinoma of lung; value of cytologic study of sputum and bronchial secretions. *J.A.M.A.*, cxxxix:497-502 (Feb. 19) 1949.

SUBCUTANEOUS EMPHYSEMA AS A SURGICAL PROBLEM

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Subcutaneous emphysema, the collection of air in the subcutaneous tissues, is a fairly common complication of a great many diseases. If the emphysema is widespread, it causes a great deal of concern to the patient and his attendants. An adequate knowledge of the pathogenesis greatly simplifies the treatment of individual cases.

The causes of subcutaneous emphysema are actually few in number. Air may be present with infections due to gas-forming organisms. This

is a definite entity not within the scope of our discussion. Subcutaneous air exists frequently due to wounds of the chest, such as needle punctures or sucking wounds caused by flying missiles, gunshot, knives, etc., or by fractures of the ribs. In the case of fractured ribs without lacerations of the skin air may migrate to the subcutaneous tissues if there are tears in the parietal pleura and the lung. Air escaping from the torn lung causes a pneumothorax. Some of the air finds its way through the lacerated pleura to the chest wall. If an open wound is present in the chest wall, air may be sucked into the pleural space, causing a pressure pneumothorax. Some of the air may stay in the chest wall or be forced back into it, especially if the skin wound is closed. Frequently in these instances there is a laceration of the lung, although it is not essential to the development of the emphysema.

Treatment of these cases may be very simple or very complex. The wound in the chest wall usually requires only cleansing, débridement and primary closure. If the pneumothorax is extensive, it may have to be relieved by continuous or intermittent aspiration. Hemorrhage from the chest wall or lung is a serious complication and, if severe, must be treated by pulmonary resection or ligation of the offending vessel. Infection is of little concern except in the most extensive wounds, and the subcutaneous emphysema requires no treatment *per se*.

Not infrequently, however, one is confronted with a case of extensive subcutaneous emphysema which is due to the above causes and in which a pneumothorax may not be present. Such cases have been reported following labor, tonsillectomy, esophagoscopy, teeth extraction, asthma, pneumonia, tracheobronchitis, anesthesia, measles, and with no obvious predisposing cause. Macklin,¹ in 1937, demonstrated experimentally the mechanism by which this occurs. Using cats as the experimental animal, he found that, when the lungs were inflated with pressures from 10 to 220 mm. of mercury, air escaped from the alveolar spaces into the bronchovascular sheaths and dissected along the sheaths to the mediastinum. From the mediastinum the air may go into the neck, retroperitoneal space or pleural cavity. In many instances the air may not migrate. Mild cases of interstitial pulmonary emphysema could not be recognized. Mediastinal emphysema without extension of air to the neck or pleura may simulate coronary disease and confront the internist with a perplexing problem.² Marcotte, *et al.*,³ confirmed this work and showed that emphysema developed when the intrabronchial pressure was elevated to 16 to 20 mm. of mercury in the cat. Berkley and Coffen⁴

had observed this same phenomenon during World War I in patients suffering from influenzal pneumonia.

It is obvious, therefore, that any strain that elevates the intrabronchial pressure may cause alveolar rupture with subsequent interstitial, mediastinal and subcutaneous emphysema. There is some suggestion that certain individuals are more prone than others to the development of emphysema, in that they may have repeated attacks with little obvious cause.

In treating these cases it is important to remember that the subcutaneous air rarely, if ever, becomes infected or causes respiratory embarrass-

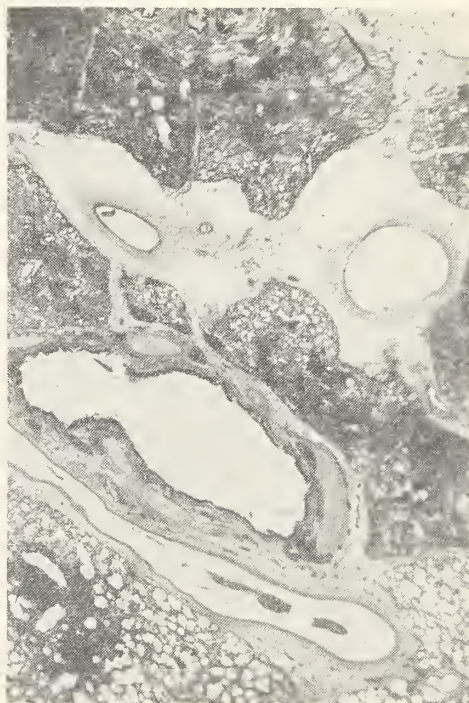


Fig. 1. Photomicrograph of the lung in a case of interstitial emphysema. A bronchus surrounded by three veins is present. Note the air around the veins. Patchy pneumonia is present also.

ment. In individuals with air hunger one would suspect extensive mediastinal or interstitial pulmonary emphysema, occasionally a pneumothorax, or the primary disease (e.g. extensive pneumonia, tracheobronchitis with edema, foreign body in the bronchial tree, etc.). Often the pneumothorax is not extensive. Treatment is directed at the primary condition. Suppression of cough is the most important single measure in stopping sudden violent increases in intrabronchial pressure. Very infrequently it may be wise to drain the mediastinal collection of air through the supraclavicular approach.

In our experimental work⁵ it was noted that the lungs of dogs and cats examined postmortem,

following subjection to high intrabronchial pressures, contained many small hemorrhages as well as interstitial emphysema. Pathologists in England who made extensive autopsy studies on blast victims during the recent war described much the same findings. It is possible that many of these unfortunate individuals who did not succumb to cerebral causes may have died of extensive interstitial emphysema.

Rarely, mediastinal and subcutaneous emphysema occurs with diseases of the esophagus. In the rare instances of spontaneous esophageal perforations, air may be present in the neck. It is important to remember that the finding of air in the subcutaneous tissues of the neck following instrumentation of the esophagus is not proof of esophageal perforation. It may have been caused by the patient's straining during the procedure. Air present in the mediastinum due to esophageal perforation always becomes infected, and the diagnosis of esophageal perforation with mediastinal or subcutaneous extension of air demands immediate drainage.

Summary and Conclusions

Subcutaneous emphysema is frequently found in general practice and is always secondary to another process: namely,

1. Infection due to gas-forming organisms (not discussed in this report).
2. Chest wall or lung wounds, in which instance the primary concern is the recognition and treatment of pneumothorax and hemorrhage.
3. Pulmonary alveolar rupture due to increased intrabronchial pressure. In this instance the pneumothorax is secondary to the mediastinal emphysema and not essential to the development of subcutaneous air. Spontaneous pneumothorax due to pulmonary tuberculosis or a ruptured bleb does not cause subcutaneous emphysema. Treatment is directed at the primary condition. Infection in the subcutaneous air is a remote possibility.
4. Air may escape from a perforation of the esophagus and migrate into the neck. Infection is the primary concern in these individuals.

BIBLIOGRAPHY

1. Macklin, C. C.: Pneumothorax with massive collapse from experimental local over-inflation of lung substance. *Canad. M.A.J.*, xxxvi:414-420 (April) 1937.
2. Hamman, L.: (a) Spontaneous interstitial emphysema of lungs. *Tr.A.Am. Physicians*, lii:311-319, 1937; (b) Spontaneous mediastinal emphysema (Henry Sewall lecture). *Bull. John Hopkins Hosp.*, lxiv:1-21 (January) 1939.
3. Marcotte, R. J.; Phillips, F. J.; Adams, W. E.; and Livingston, H.: Differential intrabronchial pressures and mediastinal emphysema. *J. Thoracic Surg.*, ix:346-355 (February) 1940.
4. Berkley, H. K.; and Coffen, T. H.: Generalized interstitial emphysema and spontaneous pneumothorax as complications of bronchopneumonia. *J.A.M.A.*, lxxii:535 (Feb. 22) 1919.
5. Adams, W. E.: Personal communication.

AN APPRAISAL OF THERAPEUTIC PROCEDURES IN BRONCHIAL ASTHMA

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The relief of the acute symptoms of bronchial asthma is of primary importance to the patient. The problem of bronchial asthma is one of greatest importance to the clinician. For the continued comfort of the patient both specific and nonspecific measures must be considered. Treatment is based upon measures which are prescribed for symptomatic relief or which are extended for the elimination or correction of the actual causes.

Of course the ideal type of relief for the asthmatic patient is that which is derived by the removal of the actual causes of the respiratory difficulty. Such relief has its foundation in a careful history revealing environmental and dietary substances which can and must be considered in the search for the etiology. Once these substances are recognized or proved, detailed instructions must be given to the patient regarding the means and methods taken to insure future and continued avoidance. The elimination of these materials from the patient's environment and diet is not an easy task. It demands complete cooperation upon the part of the patient.

Investigative work using pollen, mold or inhalant extracts is comparatively reliable. It is recognized by the majority of allergists that skin-testing with food extracts is of relatively little value. Positive skin reactions are not always significant of clinical sensitivity for the reacting food. Other methods of determining food sensitivity must be used. Information can be gained by the use of trial diets or food diaries. It must be remembered that strict elimination diets demand complete instructions to the patient regarding substitution of foods to his accepted list in order that his nutrition will be sufficient in all respects. It is useless to force food elimination and avoidance upon a patient when the only basis for such measures rests in a positive skin test reaction with no clinical evidence to support such dietary restrictions.

Elimination of environmental contacts has been an important phase in the management of the allergic patient. These procedures should hold equal importance with any other therapeutic measures, and often the importance weighs in favor of the avoidance. The pollen-sensitive patient can have complete relief if he is in such a position as to be able to remove himself completely from the area of his complaints. Advice concerning climatic change during the pollen season must be founded

upon an accurate knowledge of the patient's sensitivity as well as a speaking acquaintance with the flora that might be contacted at his vacation spot. It would be useless, for example, to suggest that a patient leave this Midwest climate in early August to escape ragweed and to remove himself to the Gulf Coast region, where the season for ragweed has its onset in middle or late September. Durham¹ has shown by pollen surveys that Isle Royal is the best ragweed refuge of the North Central states. Nasal filters, face masks and similar appliances are hardly satisfactory. The patient with seasonal bronchial asthma usually begins his complaints with a few days of hay fever, and asthmatic symptoms follow quite routinely. It has been recognized that the hay fever symptoms decrease almost entirely with the onset of the bronchial distress, and hence measures to protect the eyes and the nasal passages of the sensitive patient do little toward extending relief to the asthmatic.

Other environmental contact must be eliminated to the degree of relief regardless of skin test reactions. Many of these are dependent upon the occupation or residence of the patient. For example, a farmer must be given instructions regarding the necessity of avoiding animal danders for which he has a known or suspected sensitivity. Similarly, he should be informed that Pyrethrum, which is a close botanic relative of ragweed, can be found in most commercial fly sprays. The use of these sprays in his work will often be the explanatory factor in continued asthmatic symptoms. The use of cosmetics and perfumes by the asthmatic patient must be controlled to the extent that such beauty aids are not contributing to the degree or presence of the symptoms.

Dust is the most important of all environmental factors for the asthmatic patient. Instructions for dust avoidance must be given conscientiously and thoroughly. The application of dustproof covers to the mattress and pillows of the patient's bed is a necessity. The bedroom is the point of primary interest, since the patient usually spends approximately 8 hours of the 24 (one third of his life) in this immediate environment. Thorough and frequent cleansing, permitting no dust to accumulate or removing that which has with a damp or oil mop, waxing the floors, removing all carpeting (but permitting throw rugs), eliminating heavy draperies or venetian blinds—these are only a few of the precautions that must be met.

Institution of specific therapy in bronchial asthma can be made with a knowledge of the patient's degree of sensitivity for pollen, dust or other causative substances. It is recognized that there is no direct correlation between the size of the skin test reaction and the severity of the symp-

toms. However, skin test titration, using serial dilutions of pollen or dust extract, will give a quantitative expression of the patient's degree of sensitivity for that extract. The skin test reactive level does not in any way indicate the severity of the patient's symptoms nor the result to be expected from specific therapy. It does mean, however, that the patient with greater degree of skin test sensitivity (the patient whose reaction appears with the higher dilution) is the one in whom more care and attention must be extended in planning a treatment program. In the same thought, those patients, too, must be managed with a greater degree of care to avoid general reaction from higher dosages as the program progresses. With the onset of the pollen season, a decrease or elevation of dosage—dependent upon the skin test reactive level—is indicated in order to provide adequate relief for the individual patient. A careful perusal of the treatment dosages and progress notes for one season will assure the patient a better result in subsequent periods of therapy.

Perennial bronchial asthma due to dust sensitivity is more responsive to therapy at the present time than it has been in previous years. This is thought to be due entirely to the availability of purified house dust extract as a result of the investigative work of Efron.² This extract is reliable, retains its potency and is constant in its standard from year to year. At present there are two definite and distinct schools of thought regarding dust extract dosage in treatment. In one the strength of extract is carried in dilutions of millions and billions. In the other, the strength of the extract is maintained at the subreactive dosage, with the maximum dosage being that amount just below the general reaction level. Personally, it is not a question of high dosage or low dosage; the important level is optimum dosage which affords the patient the greatest degree of relief. In dust therapy it must be remembered that general reactions may be evidenced by headache alone rather than by aggravation of the bronchial complaints.

Reference indices will show that the available products for the treatment of acute bronchial asthmatic symptoms are numerous. Much of the relief to be expected from any of the preparations is dependent upon the route of administration. The choice of the drug as well as the most beneficial method of administration is guided by the severity of the asthmatic complaints. Few medications by mouth will be a source of relief in the severe attack.

Recommended Procedures

Epinephrine hydrochloride is the best drug for the relief of the acute attack of bronchial asthma. It definitely is not habit forming and should be

used with the onset of severe bronchial asthma symptoms. This drug in 1:1000 aqueous solution should be used in a dosage of 0.25 milliliter (4 to 7 minims). If indicated, this amount may be repeated at intervals of every 20 to 30 minutes. The dosage for children is proportionately lower, being usually 0.15 milliliter. After prolonged or frequent use of epinephrine 1:1000, some patients will find that their symptoms fail to respond to the original dosage. The tendency, therefore, is to increase the amount of each injection in order that they may obtain relief from this drug. Eventually, however, their symptoms will not respond to even larger amounts, and they are then stated to be "epinephrine-fast." Epinephrine 1:1000 is of little use in hay fever except in the treatment of constitutional reactions brought on by administration of an overdosage of pollen extract.

Epinephrine is also available in 1:100 solution for inhalation. Some patients will obtain good relief from this method of administration, but it is probably without value in young children. All patients using epinephrine 1:100 by inhalation should be instructed to thoroughly rinse the mouth after using the apparatus in order to minimize any throat irritation or dryness. The use of epinephrine 1:100 is to be advised in those patients who are in sufficient respiratory balance to permit adequate inspiration of the nebulized solution. Proper instructions to the patient and a satisfactory nebulizer are perhaps the most important features of inhalation medication. "Slow epinephrine" is available in dilution 1:500. The crystals are suspended in peanut oil or sesame oil. The dosage is usually 0.5 milliliter for an adult if the patient has never received this medication on previous occasions. Subsequent administration of epinephrine in oil may be given in a dosage of 1 milliliter if the smaller amount has produced no unpleasant reaction. The dosage for children of epinephrine in oil 1:500 is usually 0.25 to 0.5 milliliter. It is imperative that a dry sterile syringe be used for the administration of this oil solution. Epinephrine is by far the most valuable form of medication available to the asthmatic patient today.

Aminophylline (theophylline ethylenediamine) and similar xanthine derivatives are valuable drugs in extending relief to the asthmatic patient. The drug is available for administration by the following routes: intravenous, oral and rectal. Intravenous administration of aminophylline is the method of choice for this drug in the care of the severe asthmatic patient. The dosage is $3\frac{3}{4}$ to $7\frac{1}{2}$ grains in 10 or 20 cc. of diluent respectively. The solution must be given slowly, and, though reactions have been reported in the literature,

relief is often experienced before the entire amount has been injected. The rate of administration is often the deciding factor in the production of reactions and relief, so that the recommended rate suggests an elapsed time of at least five minutes for 20 cc. administration. The dosage may be repeated in six or eight hours, depending upon the requirements and the severity of the asthma. The patient with so-called epinephrine-fastness will usually obtain good relief with this method of aminophylline usage and then will again respond to subsequent low dosages of epinephrine 1:1000.

Orally, aminophylline is given in a dosage of $1\frac{1}{2}$ to 3 grains at intervals of every three to four hours. The dosage affording relief must be relatively high, and some patients will complain of associated nausea and gastric disturbance. Such nausea is central in origin and often cannot be removed by simply changing the route of administration. The drug is available in enteric-coated form, and this delayed action may permit some patients to use the drug with the desired effect being produced during the hours of sleep, affording a longer period of undisturbed rest. Combinations of xanthine derivatives, ephedrine and phenobarbital, are available under many different names — amodrine, tedral, synophedal, glucophylline, luasmin—and have been the source of much relief to many patients. Most oral administrations in bronchial asthma, however, are considered as preventive therapy, in that a tablet or capsule should be prescribed to prevent the recurrence of severe intractable symptoms.

Rectally, aminophylline may be given in a dosage of $7\frac{1}{2}$ grains. Suppositories need not be refrigerated, but Aminet suppositories for children must be. Rectal installation of a suppository or the contents of a 20 cc. aminophylline ampule ($7\frac{1}{2}$ grains) is of particular value in patients with inaccessible veins.

It is the accepted belief that narcotics have no place in the care of the asthmatic patient. *Demerol hydrochloride* is, however, of definite value in bronchial asthma because of its effect of bronchodilatation and the absence of cough depression. The dosage should be conservative, so the administration of 50 mg. subcutaneously is recommended. This dosage may be repeated in four to six hours and is to be preferred to the single use of 100 mg. In addition to its ability to produce relaxation of the bronchial musculature, demerol possesses an associated effect of sedation which is often of definite value in the care of the asthmatic patient.

Potassium iodide has long been a valuable drug in the treatment of bronchial asthma. Though it

is not recommended with the expectation of producing immediate relief, the solution or tablets are of distinct value in prolonged symptoms. The dosage of the saturated solution is usually 30 drops daily, while the tablet can be administered in an amount of about 15 or more grains per day. The chief effect of this medication rests in its ability to liquify tenacious sputum, and to combat to some degree secondary infection superimposed upon the allergic background. Some patients will be unable to tolerate continued iodide therapy because of resulting skin eruption or profuse watery nasal discharge. In these patients *ammonium chloride* in daily dosages of 30 to 45 grains may be substituted for the iodide medication.

Isuprel hydrochloride is a recently introduced bronchodilator. It is chemically related to epinephrine and is effective by sublingual administration. The drug is available in 10 mg. and 15 mg. tablets. Patients should be instructed to place one tablet under the tongue, and to avoid swallowing until the tablet has been dissolved in the saliva. The convenience of the administration by this method supplies the patient with a medication offering relief at any time or place. The dosage may be repeated every three to four hours and in some instances has been found to rival injectable epinephrine in the rapidity of its action. A 1:200 solution is marketed for nebulization.

The asthmatic patient is often in a state of acute oxygen depletion. *Oxygen* or *oxygen-helium* by inhalation has been a source of relief to many acute asthmatic persons. The gas should be given by nasal catheter or mask rather than by a tent. Most asthmatic patients will admit that they feel less confined and obtain a greater degree of benefit when oxygen is administered in this manner. The rate of administration is 5 to 7 L. per minute, and it usually should be given continuously during the periods of acute need. The indications for oxygen inhalation are essentially the same in asthma as they are for any other clinical reasons for its administration. It is important that the asthmatic patient not be placed to any effort in an attempt to obtain oxygen. Various medications may be given in association with oxygen administration, and continued relief may result from the use of bronchodilators vaporized in oxygen at regular intervals.

Ether in oil has been employed in "epinephrine-fast" persons as a retention enema and may be given without any previous preparation. The only requirement is that the buttocks of the patient be vaselized prior to the administration of this medication. The solution is given slowly, and the anesthesia is usually noted within a compara-

tively short time. Equal parts of ether and olive oil are used with the usual amount consisting of 4 to 7 ounces of the mixture, depending upon the size of the patient and the degree of relaxation desired or required. These asthmatic patients will obtain adequate rest from the installation of the enema, but wheezing and evident respiratory difficulty may continue. The resultant rest and sleep will afford the patient a good degree of strength and place him in a more responsive state, so that epinephrine again produces satisfactory temporary relief. In recent years it has seldom been necessary to resort to anesthesia in an effort to provide relaxation for the asthmatic patient. The use of any anesthetic procedure for relief of asthmatic symptoms should be confined to hospital practice.

Dehydration must be avoided or overcome in long-standing severe bronchial asthma. Often the intravenous administration of 500 to 1,000 milliliters of 5 or 10 per cent *dextrose* will tend to relieve the lack of fluid and have a beneficial effect upon the bronchospasm. The administration of 20 milliliters of 50 per cent dextrose intravenously (with or without $7\frac{1}{2}$ grains of aminophylline added) is often of benefit. These solutions aid in the liquefaction of sputum and permit the production of bronchial plugs, which in themselves offer relief to many patients. The administration may be repeated as often as indicated by other medical standards. It must be remembered that the dextrose should be dissolved in water rather than saline, in as much as the continuation of bronchial edema is markedly influenced by the saline solution.

Ephedrine and similar preparations have been employed for many years, and some patients still find the maximum degree of satisfaction from its use. The usual dosage has been found to be $\frac{1}{4}$ to $\frac{1}{2}$ grain repeated at intervals of about every four hours. Associated effects of stimulation make this drug unpleasant for some patients. In combination with other drugs ephedrine is still popular in the relief of asthmatic complaints, although many patients will be unable to use it.

Procedures Not Recommended

Morphine for all practical purposes is contraindicated in the relief of bronchial asthmatic symptoms. This decision is made because of the respiratory depression and the diminution of the cough reflex produced by this drug. The patient with asthma will relate that relief follows the production of mucoid sputum. If the cough reflex is abolished, such production cannot occur and the patient literally drowns in his own secretions. Morphine should never be used in children.

Atropine is also contraindicated in the treatment of the asthmatic patient because of its drying effect upon the secretions, even though some of its action may be that of smooth muscle relaxation.

Within the past few years allergy literature has been saturated with many reports concerning the use of *anti-histaminic* drugs in allergic states. Their use in therapy of bronchial asthma is without value, and, because of their atropine-like effect, they are definitely contraindicated. It is the rule, however, that most patients with bronchial asthma have received their share of these new allergy drugs without any benefit being derived therefrom. The reported good results in asthma are all recorded in those patients whose complaints are produced by a single factor such as horse dander. Pollen asthma does not respond in the slightest degree to this form of medication, and disappointment awaits the patient who might be seeking relief from this source. *Histamine solution*, though of definite value in some other allergic states, is without such recommendations in bronchial asthma.

On the market today are many forms of inhalors for the use of *penicillin dust*. This medication in the relief of uncomplicated bronchial asthma has been a disappointment. Indications for its use rest in those patients whose complaints have been proven to be due to a penicillin-responsive type of bacteria. It has been advocated in those cases labeled "intrinsic asthma" but seldom is distinct benefit observed in those instances. For the immediate relief of acute symptoms of bronchial asthma, penicillin is not advised, and similar statements may be applied to the use of other forms of chemotherapy.

Ethylene disulfonate is without value in bronchial asthma. Publicity given to this drug by the lay press and some professional journals would indicate that this drug was the answer to the clinician's prayer. However, the use of this medication will result in failure in the greatest majority of patients.

X-Ray therapy is not recommended for the relief of acute bronchial asthma, though there are a few isolated cases where this procedure may have some merit.

Intratracheal iodized oil is a dangerous procedure and is not advised for the relief of acute symptoms of bronchial asthma. There have been reports of death directly responsible to the use of this medication.

Vaccine therapy has seemed to be of some benefit in a few patients, but on the whole the results are disappointing. No reliance can be placed upon the skin test as a guide to determine the expected result from the use of any vaccine. There seems

to be no advantage in the use of an autogenetic vaccine over good stock material.

Routine medication for the single purpose of providing *sedation* should not be used in the expected relief of bronchial asthmatic symptoms. The usual patient with acute bronchial asthma is sufficiently exhausted that the relief of his bronchial asthma will permit adequate rest and sleep. In this same regard it must be remembered that some patients are exceptionally sensitive to commonly used sedatives.

Summary

Bronchial asthma is a condition which demands that preventive measures be considered of equal importance with any step that is taken to relieve the acute attacks. Skin testing for food extracts is of relatively little value in determining the causative factors of bronchial asthma. Environmental care and correction will do much to control the exposure of the patient to pollen, dust or other material. Specific therapy is usually indicated, however, in the pollen- or dust-sensitive patient. Such therapy should not be undertaken without preliminary testing to determine the point at which treatment should be instituted.

The patient with bronchial asthma has more than simple respiratory difficulty. Recurring symptoms of bronchial asthma can best be interrupted before complications have arisen and before permanent damage has been done to the anatomic structures involved in the illness. Asthma is a chronic illness, aggravated by acute exacerbations of distress, and only through the complete cooperation of the patient and physician can adequate relief and comfort be obtained.

BIBLIOGRAPHY

1. Durham, O. C.: Air-borne allergens in national parks. *J. Allergy*, xx:80-81 (January) 1949.
2. Efron, B. G.; Boatner, C. H.; and Everett, P.: Studies with antigens: treatment with purified extracts of house dust. *New Orleans M. & S. J.*, xciii:514-516 (April) 1941.

SPONTANEOUS RUPTURE OF THE ESOPHAGUS

Ross G. Randall, M.D., Waterloo

The rarity of this catastrophic condition is substantiated by the fact that to date only approximately 60 cases have been reported in all medical literature. However, since the symptom picture may be confusing, and the death of the patient occur early after onset, it is possible that the correct diagnosis may have been overlooked and death credited to acute pathology of the abdomen, which spontaneous esophageal rupture may simulate. Historically, the first reported case, a resumé of which has been well done by Eliason and Welky,¹ was that of the Dutch physician

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Boerhaave, who in 1724 was called to see a Dutch admiral. It seems, as was the custom of the times, that the admiral had feasted sumptuously and three days later suffered "an annoyance at the pit of his stomach." He attempted to gain relief by vomiting and suffered a severe pain in the chest near the diaphragm, dying some 12 hours later of suffocation, experiencing excruciating pain to the very end. Autopsy revealed a transverse rupture of the esophagus near the diaphragm, both pleural cavities being filled with fluid which was similar to stomach contents.

Salient Typical Features

In case reports many features are so frequently repeated that we might do well, for future reference, to hypothesize a typical case. This would usually be a male between the ages of 35 and 45 who had for sometime been a heavy drinker or eater or who had complained frequently of vague abdominal distress. Shortly after a bout of excessive drinking, eating or both, the man is nauseated and begins to vomit and, while so engaged, is suddenly seized by an excruciating pain in the lower chest, upper abdomen or thoracic spine. Vomiting ceases, but the pain persists, being barely controlled by repeated large doses of opiates. The abdomen is rigid, with the patient critically ill in profound shock, with a low blood pressure, rapid pulse, cold clammy skin, depressed temperature and extreme thirst. His respiration will be difficult, and cyanosis may be present. With this picture in mind, we may add that death will soon ensue unless our diagnosis is accurate, and the treatment correct and prompt.

Etiology

The possible causes of this condition have been listed by Ridgway and Duncan,² as: (1) congenital weakness of the lower end of the esophagus, (2) acute ulceration, (3) digestive action of regurgitated gastric juice, or (4) a sudden increase of intra-esophageal pressure.

McKenzie³ drew the following conclusions from his experiments: (1) that rupture almost always takes place in the longitudinal direction, (2) that the rent never occurs in the upper one half of the esophagus, and (3) that the left side of the esophagus is more commonly affected than the right, presumably because at the extreme lower end the right side is supported to some extent by the thoracic aorta and retropericardial fat, while the left lies immediately upon the parietal pleura.

In Barretts⁴ report, he quotes Chevalier Jackson as stressing the point that some esophageal peptic ulcers are clinically and radiologically silent and may rupture spontaneously.

However, since a large proportion of these cases

have their onset preceded by vomiting, it is felt that, here, sudden increased intra-esophageal pressure offers the best explanation. Perhaps, during the act of retching, stomach contents are violently propelled into the esophagus while the cricopharyngeal is in spasm, and the resulting intra-esophageal pressure causes rupture at its weakest spot, the left side just above the diaphragm.

Diagnosis

Since spontaneous rupture of the esophagus frequently occurs in an otherwise apparently healthy individual, its detection may be difficult and clouded by the appearance of abdominal pain first. A large number of the 60 cases reported to date were first diagnosed as a ruptured abdominal viscus and laparotomy was performed.

However, the diagnosis of spontaneous rupture is not difficult if one considers the possibility together with the history of vomiting, intense pain, cyanosis and shock. Thorough examination of the chest is of prime importance, although, as illustrated by the case of Mallam, Whitelocke and Robb-Smith,⁵ the early examination may reveal entirely normal findings. The great majority of patients suffering from esophageal rupture will be found to show either cervical subcutaneous emphysema, hydropneumothorax or both. The recognition of emphysema is usually obvious, but a radiographic examination of the chest may detect a mediastinal emphysema before its appearance is noted subcutaneously in the cervical region. Barrett⁴ stresses three diagnostic procedures when this condition is under consideration: (1) An x-ray of the chest, with the patient sitting if possible, may show liquid and gas in the pleural cavity plus collapse of the lung. (2) The suspected side should be needled and the fluid tested for hydrochloric acid. (3) Check for cervical subcutaneous emphysema.

Aldrich and Anspach⁶ also place considerable emphasis upon thoracentesis and examination of the pleural content for acid.

In differential diagnosis the conditions to be considered include perforation of an abdominal viscus, coronary occlusion, acute pancreatitis, dissecting aneurysm of the aorta, pulmonary embolism and mesenteric occlusion.

As reported by Olsen and Clagett,⁷ of the approximately 60 cases recorded in medical literature, antemortem diagnosis has been made only 14 times, and most of these were made in instances in which the patient survived the first few hours after the onset of his illness. In only 4 cases has the diagnosis been made sufficiently early to permit surgical exploration of the thorax and repair of the torn esophagus. The patients reported by Collis, Humphreys and Bond⁸ lived only

a few hours after operation. Hertzog and Leighton's⁹ patient seemed to be well on the road to recovery when he succumbed to a pulmonary embolism on the eighth postoperative day. Olsen and Clagett's⁷ case will be considered in detail later. The cases of Benson and Penberthy,¹⁰ and Frink¹¹ survived, but, in these, recovery followed late drainage of an empyema with subsequent sealing off of the esophageal fistula. Barrett¹ emphasizes that many cases of spontaneous perforation must, in the past, have been missed, even though an autopsy had been done. For this he lists two reasons: (1) The perforation may be small, and, if the esophagus is slit open after its removal from the body, the incision may pass directly through the lesion. To avoid such a mistake the esophagus should be distended with fluid before it is opened. (2) Necrosis and gangrene of the structures of the posterior mediastinum, together with postmortem autolysis of the esophagus itself, may fog the issue.

Pathology

Evidence of various pre-existing pathologic conditions of the esophagus are recorded in the literature. Klein and Grossman's¹² case revealed leukoplakia of the terminal, 10 cm., with areas of acute inflammation and longitudinal cracklike ulcers. An approximately 1 by 1 cm. ulcer on the left lateral wall, 1 inch above the cardia, was reported seen by Benson and Penberthy¹⁰ on esophagoscopy just prior to the development of esophageal rupture. Leutic periarteritis in the esophageal wall was felt to be a predisposing factor in the cases of spontaneous rupture recorded by Glass and Freeman.¹³ It seems now to be the consensus of opinion that death rapidly occurs in these cases due to the devastating mediastinitis and empyema, which results from the violent introduction of contaminated and irritating gastric contents through the suddenly ruptured esophagus.

Diagnostic Esophagoscopy

In only one instance¹⁰ was esophagoscopy performed prior to the development of rupture, and, since an esophageal ulcer had been observed, early diagnosis and adequate treatment resulted in a living patient. Since the majority of patients developing spontaneous rupture of the esophagus either gave a history of long-standing vague digestive symptoms or were found by autopsy to have definite esophageal pathology in addition to their perforation, it might be well for the endoscopist to place more stress upon esophagoscopy as a diagnostic procedure, particularly in those patients with negative physical and roentgen findings who continued to complain of persistent digestive distress.

Report of a Case

This patient, A.K., was a 36 year old white male, who on March 20, 1948, while walking across a field, suddenly developed violent abdominal pain. He vomited and was taken to his physician, who administered demerol, 100 mg., and noted boardlike abdominal rigidity. History subsequently revealed that for some time past he had complained of stomachache, and one week prior to the onset of his present illness he had taken a mixture of "liniment and water" after a meal for stomach distress. He occasionally went on a severe alcoholic binge and had participated in such a drinking bout the evening before his illness. He refused breakfast on the morning of the twentieth because of an upset stomach and ate only a light noon meal at 12:30 p. m. His seizure of violent pain occurred approximately one hour later.

Admission diagnosis at the hospital was a possible gastric perforation. Immediate laparotomy was done. There was no free fluid in the abdominal cavity and no distention of its contents. The appendix was reddened, and appendectomy was performed. Immediately following the operation, cervical subcutaneous emphysema was noted. Laboratory studies on admission showed 12,900 white blood cells per cu. mm. of blood, with 20 per cent stabs, 66 per cent segmented neutrophils and 14 per cent lymphocytes. Kahn and urine were negative and the oral temperature 99 F.

Following surgery, the patient's condition remained poor; he continued to have severe abdominal pain with a moderately rapid increase in the cervical emphysema. Dyspnea and mild cyanosis continued despite intranasal oxygen. It was at this time that an internist and the writer were asked to see the patient. On auscultation the lungs were normal, and chest and lateral x-rays of the neck revealed only subcutaneous emphysema. A tentative diagnosis of perforated esophagus was made, and large doses of penicillin and streptomycin were started. On March 22, 1948, however, the rectal temperature was 104 F.; pulse 140; and respiration 30. X-Ray of the chest, with the patient semirecumbent—it being impossible to have him sit up—was read as "diffuse increase in density of left chest most marked in outer lower portion—mediastinum displaced to right—pleural effusion; also faint irregular infiltration at right base." As a result of these findings, a thoracentesis, left, was done and foul brown fluid obtained. Immediate thoracotomy, left, was performed, with resection of portions of the seventh and eighth ribs. An empyema was revealed with a great amount of fibrin deposited upon the pleural surfaces. A small perforation

in the left lower esophagus was found; drainage was established by means of two rubber tubes. Five hundred cc. of whole blood were given at the time of surgery. Postoperatively, the patient's condition became progressively worse, and he expired on March 24, 1948. At autopsy 2 to 3 slitlike ulcers were found in the esophageal mucosa, one of which had perforated on the left just above the diaphragm.

Treatment

To date Olsen and Clagett⁷ have recorded the only case of spontaneous esophageal rupture in which early diagnosis and surgical repair of the perforation resulted in the patient's survival. It therefore seems advisable to consider a brief résumé of their report. Their patient, following an episode of heavy drinking, became nauseated, vomited and developed sudden pain in the epigastrium and lower thoracic portion of the spinal column. Admitting diagnosis was a suspected perforated abdominal viscus, but, when roentgen examination revealed a left hydropneumothorax with collapse of the lung, a clinical diagnosis of spontaneous rupture of the esophagus was made. A left thoracotomy was performed about three hours after the patient's pain first developed. The pleural space was evacuated, and a rupture of the esophagus about 3 to 4 cm. long was found just above the diaphragm. Left phrenic crush was done to paralyze the diaphragm; the esophageal perforation was closed and the lung inflated. Closed drainage was established. A nasal tube was inserted to provide a means of postoperative feeding. Five hundred cc. of whole blood was given, and the patient was placed on 30,000 units of penicillin and 0.25 gm. of streptomycin every three hours for 10 days after the operation. He was reported three months later to be leading a normal life.

Conclusion

1. Spontaneous rupture of the esophagus is a rare condition with almost 100 per cent mortality when diagnosis or treatment are delayed.

2. Treatment consists of (a) early transthoracic exploration with repair of the esophagus, (b) administration of adequate antibiotics, and (c) supportive therapy, via blood transfusions and nasal feeding tube.

3. Diagnostic esophagoscopy may be of future help in the early recognition of esophageal lesions, so that proper medical management may prevent their progress to perforation.

Discussion

Byron M. Merkel, M.D., Des Moines: It is a privilege to discuss Dr. Randall's paper. He has ably called to our attention a condition which is being

recognized now from its clinical manifestation rather than the postmortem findings. Prior to reading Dr. Randall's paper I must admit I had a vague concept of this condition, and I am sure I would not have recognized it clinically. In writing on this subject Kinsella, Morse and Hertzog* state "There are now more than 50 cases reported, most of them not diagnosed before death." They also conclude that the diagnosis is most often missed because the physicians do not think of this entity. They feel the rapid development of a hydropneumothorax is the key to the diagnosis of spontaneous rupture of the esophagus. They further state that, because of the definite clinical picture presented by these cases, at least 2 cases (Wagensteen's and Kinsella's) have been diagnosed by telephone.

The history of Dr. Randall's case is so typical that it should arouse suspicion immediately. The knowledge of this condition should make us all more concerned with the so-called neurotic symptoms often presented by the patient with mild localized esophagitis. It should also create a firm respect for properly done direct examinations of the esophagus. Lastly, it should serve as a warning that blind manipulation and treatment of esophageal disease has no place in the modern practice of medicine.

The paper is timely, and I would urge its widespread dissemination to the medical profession.

BIBLIOGRAPHY

1. Eliason, E. L.; and Welky, R. F.: Spontaneous rupture of esophagus. *Surg., Gynec. & Obst.*, lxxxiii:234-238 (August) 1946.
2. Ridgway, E. C., Jr.; and Duncan, G. G.: Spontaneous rupture of esophagus; review of literature and report of one case. *Bull. Ayer Clin. Lab. Pennsylvania Hosp.*, iii:79-98 (June) 1937.
3. Graham, E. A.; Singer, J. J.; and Ballou, H. C.: *Surgical Diseases of the Chest*. Philadelphia, Lea and Febiger, 1938. p. 377.
4. Barrett, N. R.: Spontaneous perforation of esophagus; review of literature and report of three new cases. *Thorax*, i:48-70 (March) 1946.
5. Mallam, P. C.; Whitelocke, H. A. B.; and Robb-Smith, A. H. T.: Spontaneous rupture of esophagus. *Brit. J. Surg.*, xxvii: 794-796 (April) 1940.
6. Aldrich, C. A.; and Anspach, W. E.: Rupture of esophagus from blow on abdomen. *Radiology*, xxxii:93-95 (January) 1939.
7. Olsen, A. M.; and Clagett, O. T.: Spontaneous rupture of esophagus; report of case with immediate diagnosis and successful surgical repair. *Postgrad. Med.*, ii:417-421 (December) 1947.
8. Collis, J. L.; Humphreys, D. R.; and Bond, W. H.: Spontaneous rupture of esophagus. *Lancet*, ii:179 (Aug. 5) 1944.
9. Hertzog, A. J.; and Leighton, R.: Spontaneous perforation of esophagus. *Minnesota Med.*, xxix:442 (May) 1946.
10. Benson, C. D.; and Penberthy, G. C.: Rupture of esophagus in child 2 years of age, with recovery. *Surgery*, iv:779-780 (November) 1938.
11. Frink, N. W.: Spontaneous rupture of esophagus; report of a case with recovery. *J. Thoracic Surg.*, xvi:291-297 (June) 1947.
12. Klein, L.; and Grossman, M.: Rupture of esophagus. *M. Bull. Veterans Administration*, xix:277-283 (January) 1943.
13. Glass, W. E.; and Freeman, W.: Spontaneous rupture of esophagus in syphilis. *A. J. M. Sc.*, clxxxix:80-86 (January) 1935.

*Kinsella, T. J.; Morse, R. W.; and Hertzog, A. J.: Spontaneous rupture of esophagus. *J. Thoracic Surg.*, xvii:613-631 (October) 1948.

North Central Section of the American Urological Association will sponsor a postgraduate course in urology December 5 to 9, 1949, at the Hotel Sherman, Chicago, Ill. Attendance is open to members of the North Central Section, residents in Urology, and physicians who are interested in a short postgraduate course. Attendance will be limited, and early reservations are requested; tuition fee, \$50.00. Write Dr. William J. Baker, 7 W. Madison Street, Chicago 2, Ill.

CARCINOMA OF THE BREAST

Report of an Untreated Case

Julius S. Weingart, M.D., Des Moines

The life span in carcinoma of the breast is extremely variable, probably more so than in any other type of cancer. The average in untreated patients is said to be three years, but this is a mean between wide limits. The anterior one, let us remember, is the date of discovery of the tumor, not of its beginning. This is a point too often forgotten in the discussion of early diagnosis.

In a given case it is often possible to make a bad prognosis but never wise to make a favorable one, for the main criterion is the presence or absence of metastases, and that may well be, and often is, entirely uncertain. Indeed, neither the length of time since the patient has known of the tumor nor the histologic picture that some pathologist grades pseudomathematically afford any sure base for judgment.

Simply as another illustration of these points, the following report is appended:

In July 1937 a colleague suggested that a patient whom he had just visited for the first time would make an interesting subject for my camera. I was making a collection of such photography and hastened to establish contact with the patient's family. They gave ready permission, and an appointment was made.

When we arrived we found a woman of about 50, in fair nutrition, as I thought, with a large nodular mass in the position of the right breast. This was largely ulcerated, deep red in color and with some superficial seropurulent exudation. It was not nearly as fetid as one would expect, since it had been the object of meticulous care.

We learned that it had been present for about seven years. The patient had steadfastly refused surgical intervention, being firmly convinced she would be healed by prayer.

Something told us that it would be futile, if not perhaps irreverent, to attempt to disabuse her mind of this belief. The walls of her home were hung with devotional pictures, and she herself showed such a serene and trustful attitude of patient suffering that we felt humble in her presence. One does not argue with a saint.

About four years later, long after I had supposed her dead, a social worker informed me that she was indeed still alive, and that perhaps I would like to use my camera again.

On this second visit, in June 1941, I found the patient definitely emaciated and the tumor somewhat larger, now like a huge cluster of fruit. Her husband told me that these masses would occasionally become loose and drop off. There were

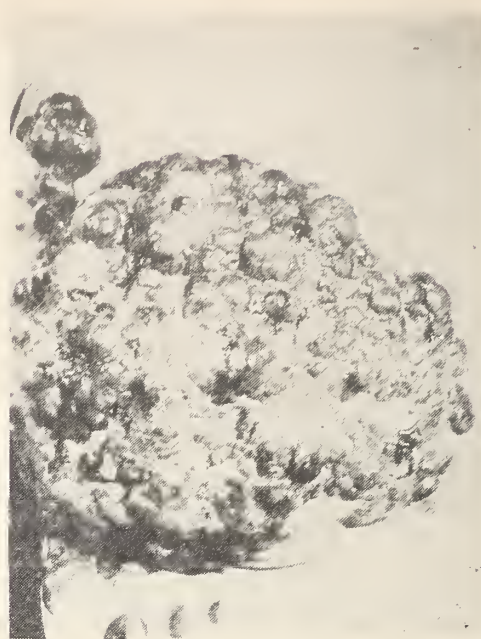


Fig. 1. July 1937.

no other symptoms except the discomfort of the large tumor and the slowly progressing physical deterioration.

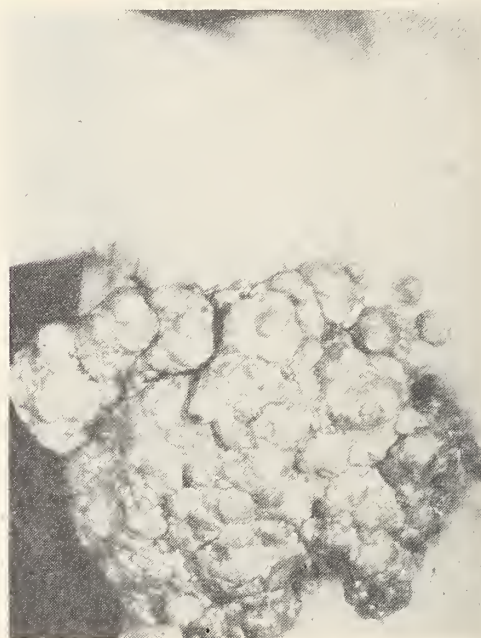


Fig. 2. June 1941.

It was in October 1944 that I took the last photograph. Cachexia had advanced, and the tumor was even larger, a fiery red mass still of a multi-globular, cluster-like form.

One month later the patient died. As part of the preparation of the body for burial the undertaker removed the tumor. His thoughtfulness

made it possible for me to secure a portion for histologic examination.

This showed large groups of closely packed epithelial cells filling the spaces for a fibrous reticulum. Most of these had large nuclei with a loose chromatin network, in no way distinguishable from those of cancers which metastasize and cause early death.

There was no postmortem examination, but it seems quite unlikely that internal spread had occurred to any extent.

The duration had been at least 14 years.

College of Medicine
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CLINICOPATHOLOGIC
CONFERENCE

April 6, 1949

Summary of Clinical Record

A 74 year old retired farmer entered the University Hospitals for the second time on Dec. 31, 1948, because of a draining sinus in the right inguinal region. He was first seen in 1934, when he gave a 20 year history of recurring episodes of postprandial epigastric pain and discomfort. The symptoms had always been relieved by food and antacids. In addition he had complained of increasing exertional dyspnea for the preceding six weeks and more recently the appearance of cough, occasionally productive of a small amount of blood-tinged sputum. During the few days preceding admission to the hospital paroxysmal nocturnal dyspnea, orthopnea and mild ankle edema had appeared.

The past history was significant only in that the right testicle had been surgically removed many years previously after trauma, and a repair of a right inguinal hernia had been performed in 1931.

The physical examination disclosed the following significant findings: orthopnea, dullness to percussion and diminished breath sounds over both lungs, enlargement of the heart to the left anterior axillary line, a short low pitched systolic apical murmur, arterial tension 120/95 mm., a slightly enlarged liver and pitting edema of the lower extremities. The routine laboratory studies were negative except for slight albuminuria. Serologic tests for syphilis were negative. A roentgenogram of the chest revealed that both leaves of the diaphragm and the costophrenic angles were obliterated by increased density. The contour of the heart suggested that the enlargement

which was present was predominantly left ventricular. A gastrointestinal roentgenographic study revealed a penetrating lesion of the lesser curvature of the stomach. Gastroscopic examination confirmed the impression that the lesion was benign. An electrocardiogram revealed a complete left bundle branch block. The patient was given digitalis and mercurial diuretics with striking improvement. He was discharged with digitalis and dietary and antacid regime for the abdominal complaints.

In the interval before the present admission he had eventually resumed his old dietary habits without recurrence of the gastrointestinal symptoms. He had been able to do light farm work until October 1948, when the scrotum was accidentally traumatized and subsequently a painful swelling developed in the right inguinal region, which eventually ruptured and intermittently discharged a thick yellowish material. No systemic reactions had been noted except for increasing weakness, and there were no symptoms referable to the genitourinary tract. During the month preceding the final admission there had been a recurrence of ankle edema.

The patient did not appear to be acutely ill at this admission. Significant points in the physical examination included moderately advanced retinal arteriosclerotic changes, diffuse crepitant rales throughout both lungs, enlargement of the heart to the left anterior axillary line, short low pitched systolic murmurs over both the mitral and aortic areas, a blood pressure of 100/72 and periods of cardiac arrhythmia which suggested that the rhythm was totally irregular. A draining sinus was present over the area of the right external inguinal ring. The tissues immediately surrounding the sinus tract were indurated, but there was no acute inflammatory reaction. A small amount of serous fluid could be expressed from the sinus tract. The prostate gland was slightly enlarged. There was moderate pitting edema of the ankles. The body temperature was normal.

The significant laboratory findings included 3 plus albuminuria, a few hyaline casts in the urinary sediment and a leukocyte count of 20,800 per cu. mm. The differential blood count was normal. A tuberculin test was positive. The plasma proteins, blood urea nitrogen and creatinine were normal. A roentgenogram of the chest revealed generalized cardiac enlargement with some increased density in the right base. A flat film of the abdomen was negative. A roentgenographic study of the dorsolumbar spine revealed only hypertrophic arthritis. Material from the sinus tract was not obtained for culture.

On Jan. 1, 1949, he complained of pain in the

scrotum, and the left epididymis was found to be swollen and acutely tender. The administration of penicillin was begun at this time; he was already receiving a low sodium diet, digitoxin and mercurial diuretic. During the first week of hospitalization the rectal temperature rose to a maximum of 100.6 F. Increasing mental confusion appeared, and the pulse rate fluctuated between 72 and 130 beats per minute. At one time he was thought to have auricular fibrillation, but the electrocardiogram revealed only auricular premature beats. He became somewhat more short of breath during this time. The cardiac rate continued to be rapid despite adequate digitalization, and on the afternoon of Jan. 13, 1949, he complained of slight pain in the chest located to the left of the sternum which was accentuated by deep inspiration. Physical findings in the chest were unchanged. The pulmonic second sound was not accentuated. The sputum became slightly blood-streaked. There was slight tenderness of the calves of both legs. The edema which was present upon admission had disappeared, and there were no palpable veins. On the following day the right lower extremity was definitely swollen and tender, and there was tenderness along the course of the right great saphenous vein. The swelling and tenderness were much less in the left lower extremity. A roentgenogram of the chest revealed a diffuse patchy increase in density throughout both lung fields. The patient was afebrile at this time. Therapy with heparin and dicumarol was begun. He received only two doses of dicumarol, and the prothrombin time was significantly depressed. He continued to raise blood-streaked sputum, but there was no evidence of significant hemorrhage.

During the following few days the pulmonic second sound became markedly accentuated. The swelling and tenderness of both lower extremities increased, and fine and coarse crepitant rales were evident over both lungs. The cardiac rate varied between 130 and 160 beats per minute, and the rhythm became totally irregular. Auricular fibrillation was demonstrated by an electrocardiogram. The use of intravenous quinidine was unsuccessful in restoring normal cardiac mechanism on Jan. 19, 1949. Death occurred at 0735 hours on Jan. 20, 1949.

Clinical Diagnosis

Phlebothrombosis.

Dr. L. January (Internal Medicine): This 74 year old patient was admitted to this hospital for the second time on Dec. 31, 1948, because of a draining sinus in the right inguinal region. The information given in the protocol indicates that at the first admission he was suffering from con-

gestive heart failure and from gastric ulcer, which apparently was thought to be benign in character. The subsequent course confirmed this impression. The therapy which he received was satisfactory, and he made a reasonably good recovery. In the interval following this admission he eventually resumed his old dietary habits without recurrence of the gastrointestinal symptoms, and he continued to take digitalis. He had been able to do light farm work until approximately two months before admission. During the month preceding admission there had been a recurrence of ankle edema, which had been absent during the previous five years. Upon admission it was stated that he did not appear particularly ill, but there was evidence in the physical examination of arteriosclerosis and of congestive heart failure as manifested by pulmonary rales and by an enlarged heart, an apical systolic murmur and ankle edema. The blood pressure was 100/72. The cardiac mechanism at times appeared to be totally irregular and at other times was apparently thought to be a regular sinus rhythm.

First of all, we should consider the problem of the draining sinus. The history indicates that it followed trauma to the scrotum. It seems to me that one should first consider the draining sinus to be the result of a suppurative lymphadenitis with subsequent abscess formation and rupture. One might also consider a tuberculous process either from a lymph node or from an abscess arising in deeper tissues, which pointed here, or a fecal fistula, blastomycosis or actinomycosis. Cultures were not obtained, as I understand it, because the following day an acute left epididymitis appeared. Penicillin was begun, and the sinus tract, which was his main complaint at the time of admission, promptly healed. This seems to substantiate the impression that it was an inflammatory reaction arising in a lymph node.

We find from here on that despite adequate treatment the heart failure steadily grew worse. Penicillin was used for control of the infection, but the patient deteriorated rapidly. Dyspnea became more marked, and mental confusion appeared. The epididymitis is said to have been a severe one. Furthermore, the cardiac mechanism disturbance present on admission became more pronounced, and it was shown not to be an auricular fibrillation as originally thought clinically but simply multifocal premature beats. Omitted from the protocol is the fact that the left bundle branch block present at the first admission had remained as you would expect. On the afternoon of Jan. 13, 1949, 14 days after admission, he complained of chest pain and shortly thereafter began to raise blood-streaked sputum. This, occurring in the

course of heart failure, leads to the supposition of a pulmonary embolus. The site of the embolus, as you interpret from the protocol, was not apparent on this day. I would think that under these circumstances one must think first that its site was from intracardiac thrombosis, incident to his heart failure. This occurs often in the course of prolonged heart failure, although perhaps not as often as one would anticipate.

On the following day signs of a thrombophlebitis involving superficial veins of both lower extremities appeared. When this was recognized, the decision regarding therapy was entered into with the Department of Surgery, and it was decided that anticoagulant therapy should be used. This was done most unsuccessfully. He initially received heparin intravenously and two doses of dicumarol. The prothrombin time, which was even slightly prolonged before dicumarol was given, became exceptionally prolonged, and no further medication was given. There was no evidence that he had the complication of hemorrhage as a result of the low prothrombin time. The signs of cor pulmonale incident to pulmonary emboli became somewhat more evident as the days went on, in that the pulmonic second sound, which was not abnormal earlier in the course, became markedly accentuated.

Many times the diagnosis of pulmonary embolism is not as easy as it was in this patient. First of all, the source is not as apparent as it seemed to be in this instance from thrombophlebitis of the lower extremities. And, secondly, all patients do not accommodate us by coughing up blood-stained sputum. Commonly, the onset is one of sudden pain in the chest and, if the embolus is large, fatal termination; but often the embolus is smaller, the so-called "warning embolus," as in this case. Very often this suggests a peripheral thrombophlebitis that had not been thought of or discovered prior to that time. The patient often has acute pain in the chest, sudden dyspnea and a fall in blood pressure, and examination may demonstrate that the right ventricle and pulmonary conus are over-accessible to palpation, and that the pulmonic second sound is accentuated. The electrocardiogram, not infrequently, is an aid in diagnosis, particularly in distinguishing myocardial infarction and pulmonary embolism.

The clinical impressions are arteriosclerotic heart disease, cardiac enlargement, congestive heart failure, left bundle branch block, auricular fibrillation, thrombophlebitis of the superficial veins of the legs, pulmonary emboli and pulmonary infarction and an acute left epididymitis. Furthermore, one can only speculate upon the possibility of intracardiac thrombosis as the site

for the pulmonary emboli and upon the nature of the sinus tract in the inguinal area and the status of the old gastric ulcer.

Necropsy Diagnoses

A large pulmonary thrombus was present in the pulmonary arterial branch supplying the left upper lobe. The thrombus was brown and showed beginning organization. The left upper lobe was largely necrotic. No other thrombi were found in the pulmonary arteries. A thrombus of about the same age was present in one of the large hilar veins of one kidney. There was no evidence of infarction of the kidney. Organizing mural thrombi were present between the columnae carneae of the right ventricle. No fresh thrombi were found anywhere. No thrombi were found in the iliac veins nor could any be massaged from the right lower extremity. The heart showed moderate hypertrophy of the left ventricle and mild myocardial fibrosis. There was bilateral pleural effusion and ascites. The liver and spleen were congested with considerable central necrosis of the liver.

There was suppurative cellulitis of the left epididymis. *Escherichia coli* and *Proteus vulgaris* were cultured from the pus of this lesion. There was patchy lobular pneumonia with areas of necrosis.

There was rather severe generalized arteriosclerosis and prostatic hyperplasia. Incidental findings included cholecystolithiasis, absence of the right testicle and diverticulosis of the sigmoid.

Massive pulmonary embolism, left.

Acute suppurative epididymitis, left.

Hypertrophy of left ventricle.

Chronic cholecystitis with cholecystolithiasis.

Prostatic hyperplasia.

Calcified nodule of lung, cause undetermined.

Pleural effusion, moderate.

Congestion of liver and spleen.

Arteriosclerosis, generalized.

Arteriolar nephrosclerosis, mild.

Dr. January: The problem on which this patient focuses our attention is that of the management of thromboembolic disease. Was the management, after the warning pulmonary embolus, anticoagulant therapy or should venous ligation have been performed, or should we have adopted the "do nothing" policy? The latter policy can be dismissed, since it is generally agreed by the antagonists of either therapy that the results from either are better than are those from doing nothing. In the case under discussion the pathologist has settled the question regarding venous ligation, since intracardiac thrombosis and renal vein thrombosis were both demonstrated at autopsy.

The entire problem is not a simple one, since ordinarily we begin, just as in this patient, after the diagnosis of thrombotic disease becomes apparent. In the case we are now discussing there is the problem of preventing intravascular or intracardiac thrombosis. There is quite general agreement that interfering with the coagulation process of the blood will go far in preventing the thrombotic process from arising. The statistics regarding the anticoagulant therapy of myocardial infarction are overwhelmingly in favor of the patient who received such treatment, and the major drop in mortality has been in preventing thromboembolic complications first and only secondarily the prevention of the spread of the coronary thrombus or the development of an additional coronary accident. Also, it is my opinion that there is ample evidence that postoperative thrombophlebitis can be significantly decreased by anticoagulant therapy if it is begun in advance of the formation of thrombi.

Once the thrombotic disease had begun, however, and it is often unrecognized until a warning pulmonary embolus appears, anticoagulant therapy can be expected to prevent only the formation or propagation of additional thrombi. No one claims that they affect the already existing thrombosis. It seems to me that with this understanding, and if ligation is not feasible or not possible, medical management by the use of heparin and dicumarol is not only justified but indicated. There are statistics to show that under these circumstances these drugs are valuable in preventing additional pulmonary emboli. There does seem to be some added risk that pulmonary hemorrhage from the infarcted lung may occur when anticoagulants are used, but this risk is not sufficient to counterbalance the risk of a fatal pulmonary embolus from advancing thrombus, be it intravascular or intracardiac in origin. The results are not always satisfactory. We have seen more than one patient die from pulmonary embolism, even though coagulability of the blood had been depressed. Nevertheless, I do not see how it is possible to overlook the results of several carefully observed series of patients upon whom anticoagulants were used.

Dr. N. A. Womack (General Surgery): The diagnosis of intravascular clotting in this patient is not too difficult to make, as the picture, unfortunately, is one that is frequently seen. The thrombosis, here, apparently occurred in both superficial femoral veins, with subsequent embolism to the lung. Whether or not the extension of the thrombus was up to the vena cava can only be inferred. In establishing such a diagnosis, however, we immediately are confronted with

the question of why this situation takes place so frequently in terminal heart disease, in certain surgical procedures and, in particular, in older individuals.

In an effort to answer this question many investigations have been carried out to determine, if possible, the presence or absence in those situations of substances enhancing the ability of the blood to clot. Such studies have included prothrombin activity, fibrinogen B, antithrombin levels in the plasma, prothrombin consumption, thromboplastinogen concentration in the plasma, and degrees of clot retraction. In spite of the occasional enthusiastic reports on such studies, by and large they either have fallen short in subsequent efforts at verification or have failed to satisfy critical statistical analysis. We therefore are forced to conclude that the humoral factors relating to blood clotting are remarkably constant in those patients subject to intravascular clotting, insofar as our clinical and laboratory tests on these patients are concerned. If a variation in coagulability of the blood is brought about by certain pathologic states such as heart disease, certain cancers and certain operations, it is brought about by factors not yet clearly defined and not subject as yet to laboratory measurement.

The vascular wall in these situations is more easily incriminated. The endothelium apparently is extremely sensitive in injury from trauma, infection and long-standing anoxic phases. When injury to the endothelium occurs, there is a deposit of platelets, with breakdown and liberation of their enzyme. Where the circulation is slow, there is less chance for adhering platelets to be swept away and less enzymatic dilution and therefore more fibrin formation. Such a clot will propagate in the direction of blood flow until vascular connections are encountered which make the rate of flow so great that continuation of the clot becomes difficult. Where the intimal injury is extensive, the clot adheres firmly. When injury is slight and limited, adherence is not so firm and embolism more likely. Where infection is present, this injury often is progressive and extreme and thus embolism not so common. This has led to a differentiation between infectious thrombophlebitis and phlebothrombosis from a clinical standpoint. As Virchow pointed out, there is but little basis for such a classification. The process of intravascular clotting is the same regardless of the cause of the endothelial injury, and the degree of endothelial injury often is not related to the origin of the injurious agent or situation.

Thus, there are degrees or extents of intravascular clotting but not types. Let us, therefore, be concerned clinically with the extent of endo-

thelial injury rather than the cause of this injury and not lend blind faith to a categorical classification. When intravascular clotting occurs, evidence of inflammation accrues as pain and tenderness over the vein and, on muscular contraction in this area, edema and at times fever. There often is associated vascular spasm, and at times considerable symptomatic relief is obtained by injecting novocaine around the sympathetic nerve supply to the part. As a rule, the greater the evidence of inflammation, the greater the endothelial injury and thus the less the chance of embolism. The patient under discussion this afternoon presented such evidence of inflammation. Because of the danger of pulmonary embolism, venous ligation was considered here. In all probability, a bilateral ligation of either the common femoral or common iliac veins would have been necessary. This would have been both hazardous and disabling. Furthermore, the anoxia that played a part in the origin of the clots was now extant in other vessels, and so similar thromboses could occur elsewhere.

This effort to prevent pulmonary embolism in patients by venous ligation in the presence of intravascular clotting has been attempted for many years. Because it is disabling and because most people with thromboses do not develop emboli, many surgeons have been reticent in performing the procedure, particularly where large veins such as the common femoral or the vena cava are concerned. Others, however, have been enthusiastic to the extent of ligation of the superficial femoral veins on each side even before thrombosis has occurred. The subject is most difficult to evaluate, and yet it must be evaluated critically before an operation that carries with it the chance of doing considerable harm be adopted as a routine procedure either in patients undergoing surgery or in people with decompensated heart disease. Such a study will require many more observations than have as yet been made.

Another form of therapy which has been utilized has been that of the anticoagulants, particularly heparin and dicumarol. Heparin apparently acts both as an antiprothrombin and an antithrombin, while dicumarol decreases the prothrombin of the blood. In both instances less thrombin is formed. As near as can be determined, however, to utilize these anticoagulating agents effectively, it is necessary to reduce the prothrombin activity to about 30 per cent of normalcy. Since the coagulability of the blood when subjected to the influence of the anticoagulants is subject to considerable variation, in order to prevent peaks of greater than 30 per cent normalcy it would be necessary to keep the coagulability well below this level. Yet, where coagulability is

found to be below 30 per cent of normalcy, we know that a condition of great hazard has been superimposed upon the patient. If he remains free from accident, all may go well. The slightest accident, however, may result fatally. We therefore must conclude that adequate therapy with anticoagulants in order to prevent intravascular clotting is in itself not an innocuous procedure.

Let us now consider the use of anticoagulants after the clot has formed. Will the use of anticoagulants in such a situation tend to decrease the tendency for embolism, or will it tend to increase such a tendency? As yet, information is not available to answer either of these questions. An answer is difficult because once a pulmonary embolus has taken place the endothelium in the pulmonary vein is damaged. Therefore subsequent embolism can take place from the pulmonary vein and does not necessarily mean that the original site is involved with a second embolic phenomenon. I find myself still searching for an answer to this question from a therapeutic standpoint. Both in the prophylaxis of subsequent embolism and in the treatment of such intravascular thromboses, we are confronted with a situation in which the therapeutic agents available at the present time have questionable effectiveness and carry in themselves considerable hazard. In the meantime perhaps the best preventive measure which can be used is that of reducing the occurrence of anoxia and vascular injury and of not allowing the circulation time to be unnecessarily slowed.

INFORMATION WANTED

On Cases of Peptic Ulcer in Twins

Physicians are asked to cooperate in assembling material for a study of the hereditary predisposition for peptic ulcer through its occurrence in twins. In cases in which one or both twins develop peptic ulcer, information is requested on (1) the site and age of onset of ulcer, (2) the sex, date of birth and type of twins (mono- or diovular), and (3) the number and age of brothers and sisters and the absence or presence of ulcer in each. Send to A. C. Ivy, M.D., Dept. of Clinical Science, University of Illinois, 1853 W. Polk St., Chicago 12, Ill.

American College of Surgeons 35th Clinical Congress will be held October 17 to 21, 1949, at the Stephens Hotel in Chicago. Fellows are entitled to attend the scientific and social sessions of the 6th Inter-American Congress of Surgery, which meeting is to be held in conjunction with it and will continue through October 23.

"Grass Roots Conference"—The 6th National Conference of County Medical Society Officers is scheduled for December 8, 1949, at the Hotel Statler, Washington, D. C. All registrants for the A.M.A. Clinical Session and their wives are invited to attend.

STATE DEPARTMENT OF HEALTH

Walter Biering

MORBIDITY REPORT

Diseases	Aug. '49	July '49	Aug. '48	Most Cases Reported From:
Diphtheria	1	2	2	Black Hawk
Scarlet Fever	2	13	17	Cerro Gordo, Polk
Typhoid Fever	0	0	0	
Smallpox	0	0	0	
Measles	31	119	23	Guthrie, Linn
Whooping Cough	14	33	22	Dubuque, Polk, Woodbury
Brucellosis	28	96	50	Scattered
Chickenpox	4	64	24	Polk, Dubuque
German Measles	3	7	4	Des Moines, Marshall, Story
Influenza	0	0	0	
Meningitis, Meng. ..	0	5	4	
Mumps	98	137	61	Floyd, Story, Woodbury
Pneumonia	2	6	3	Boone, Webster
Poliomyelitis	410	170	163	Black Hawk, Dubuque Polk, Pottawattamie
Rabies in Animals..	11	19	..	Polk, scattered
Tuberculosis	53	105	62	For the State
Gonorrhea	59	77	109	For the State
Syphilis	183	205	83	For the State

LABORATORY REQUIREMENTS FOR BRUCELLOSIS COMPENSATION CASES*

*Iowa Occupational Disease Law
85.70 Sec. 11 (a) and (b)*

Sec. 11. Diagnosis for Brucellosis

When any employee is clinically diagnosed as having Brucellosis (undulant fever) it shall not be considered that the employee has the disease unless the clinical diagnosis is confirmed by:

(a) A positive blood culture for *Brucella* organisms, or (b) a positive agglutination test which must be verified by not less than two (2) successive positive agglutination tests, each of which tests shall be positive in a titer of one (1) to one hundred sixty (160) or higher. Said subsequent agglutination tests must be made of specimens taken not less than seven (7) nor more than ten (10) days after each preceding test.

The specimens for the tests required herein must be taken by a licensed practicing physician or osteopathic physician and immediately delivered to the State Hygienic Laboratory of the State Department of Health at Iowa City, and each such specimen shall be in a container upon which is plainly printed the name and address of the subject, the date when the specimen was taken, the name and address of the subject's employer and a certificate by the physician or osteopathic physician that he took the specimen from the named

subject on the date stated over his signature and his address.

The State Hygienic Laboratory shall immediately make the test, and upon completion thereof it shall send a report of the result of such test to the physician or osteopathic physician from whom the specimen was received and also to the employer.

In the event of a dispute as to whether the employee has Brucellosis, the matter shall be determined as any other disputed case.

IOWA HOSPITAL CONSTRUCTION

Federally aided hospital construction is well under way in Iowa with 17 projects being built and 10 additional projects recently approved by the Division of Hospital Services of the Iowa State Department of Health.

The construction program in Iowa is ahead of the surrounding states in number of projects and amount of funds allocated and under contract. Each of the projects represents two-thirds or more local funds raised in the community matched with funds from the Hospital Survey and Construction Act, Public Law 725, known as the Hill-Burton Act.

The following data presents information on the hospital projects comprising the first three years' allotment of Federal funds. The total cost figures consist of the entire cost of the project, including the building and all equipment necessary to open the hospital for patient care service:

The cost data has been broken down into the component cost of a hospital in a bulletin for distribution to architects and interested parties, as a guide in estimating the cost of future hospital projects. This information should be of particular interest to sponsoring groups to assist in fund-raising campaigns.

Individuals and groups interested in the development of a hospital project may obtain this bulletin together with publications to aid in the architectural planning and selection of equipment from the Division of Hospital Services of the Iowa State Department of Health.

*Iowa Workmen's Compensation Law, Revised to June 1, 1947.

PROJECT	NO. BEDS	FLOOR AREA BY SQ. FT.	COST	% COMPLETED
Bloomfield Davis County Hospital General	34	24,020 Total 706 Per Bed	\$ 499,941.94 Total 14,700.00 Per Bed	60%
Keosauqua Van Buren County Memorial Hospital Maternity and Emergency	23	12,039 Total 523 Per Bed	\$ 275,985.97 Total 12,000.00 Per Bed	15%
Greenfield Adair County Memorial Hospital Maternity and Emergency	29	22,264 Total 768 Per Bed	\$ 380,284.68 Total 13,113.00 Per Bed	50%
Winterset Madison County Memorial Hospital General	39	20,113 Total 516 Per Bed	\$ 529,062.44 Total 13,565.00 Per Bed	65%
Manchester Delaware County Memorial Hospital General	39	19,407 Total 498 Per Bed	\$ 372,073.76 Total 9,540.00 Per Bed	30%
Waukon Veterans' Memorial Hospital General	22	13,155 Total 598 Per Bed	\$ 276,019.27 Total 12,546.00 Per Bed	43%
Maquoketa Jackson County Hospital General	34	26,388 Total 776 Per Bed	\$ 530,352.00 Total 15,600.00 Per Bed	50%
Fairfield Jefferson County Hospital General	25 (Addition)	29,713 Total 594 Per Bed	\$ 530,352.00 Total 11,462.00 Per Bed	65%
Mount Ayr Ringgold County Hospital General	30	17,518 Total 584 Per Bed	\$ 343,065.00 Total 11,435.00 Per Bed	1%
Denison Crawford County Memorial Hospital General	50	27,800 Total 556 Per Bed	\$ 546,512.59 Total 10,930.00 Per Bed	7%
Storm Lake Buena Vista County Hospital General	50	27,400 Total 548 Per Bed	\$ 518,155.96 Total 10,363.00 Per Bed	12%
Sac City Loring Hospital General	32	15,888 Total 497 Per Bed	\$ 307,000.00 Total 9,594.00 Per Bed	20%
West Union Palmer Memorial Hospital Maternity and Emergency	20	10,869 Total 543 Per Bed	\$ 242,199.51 Total 12,110.00 Per Bed	20%
Red Oak Murphy Memorial Hospital General	17 (Addition)	11,390 Total 670 Per Bed	\$ 189,774.00 Total 11,163.00 Per Bed	50%
Corning Rosary Hospital General	38	27,170 Total 715 Per Bed	\$ 565,050.80 Total 14,070.00 Per Bed	10%
Cherokee Sioux Valley Hospital General	42 (Addition)	23,800 Total 566 Per Bed	\$ 443,244.00 Total	
Des Moines Iowa Methodist Hospital General	22 (Addition)	60,970 Total	\$1,175,000.00 Est.	
Ottumwa Ottumwa General Hospital General	93	81,698 Total 880 Per Bed	\$1,567,324.25 Est.	Planning Stage
Guthrie Center Guthrie Center County Hospital General	30	18,760 Total 625 Per Bed	\$ 384,206.60 Est.	Planning Stage
Grundy Center Grundy County Memorial Hospital General	32	22,110 Total 690 Per Bed	\$ 444,619.39 Est.	Planning Stage
Clarion Community Memorial Hospital General	22	12,073 Total 548 Per Bed	\$ 277,920.00 Est.	Planning Stage
Sioux Center Sioux Center Community Hospital General	26	14,460 Total 557 Per Bed	\$ 281,770.00 Est.	Planning Stage
Spencer Spencer Municipal Hospital General	47	26,198 Total 557 Per Bed	\$ 512,852.00 Est.	Planning Stage
Sheldon Community Memorial Hospital General	24	13,469 Total 562 Per Bed	\$ 294,111.06 Est.	Planning Stage
Council Bluffs Edmundson Memorial Hospital General	56 (Addition)	14,300 Total	\$ 454,935.00 Est.	Planning Stage
Vinton Virginia Gay Hospital General	36	19,744 Total 549 Per Bed	\$ 373,000.00 Est.	Planning Stage
Cedar Rapids St. Luke's Methodist Hospital General	150 (Addition)	107,000 Total 713 Per Bed	\$2,291,783.55 Est.	Planning Stage

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The Iowa Interprofessional Association— Fifteen Years Old

It may come as a surprise to many Iowa physicians to know that for fifteen years we have had functioning here in the state an Interprofessional Association composed of official representatives from the fields of medicine, dentistry, pharmacy, nursing and veterinary medicine. The association is the outgrowth of a joint committee, which functioned from 1932 to 1934, of the State Medical Society and the Iowa Pharmaceutical Association. Because the work of this committee was so effective, it was felt its worth might be expanded by enlarging it to a group composed of nurses, dentists and veterinarians as well as pharmacists and doctors. On Dec. 9, 1934, many persons from all five groups and all parts of the state met and drew up the essentials of the Iowa Interprofessional Association. This organization plan was then adopted by the constituent state associations, and the Interprofessional Association came into being in the fall of 1935.

The Association is loosely knit, each profession appointing three official and three alternate delegates to attend its meetings. In recent years, each association has also sent its secretary in order to give continuity of service to the interprofessional work. An Executive Council composed of one member from each profession has been formed to expedite the work during the year. At the annual meeting in September 1949 the Iowa Hospital Association was voted into membership, since it has many interests similar to the other groups; it was also decided that the Iowa Bar

Association should be invited to attend all of the meetings if it wished to do so. In other states the bar associations have been cooperating actively with the interprofessional groups.

The purpose of the interprofessional association is to federate the professional associations to carry out the following objectives:

1. To provide a clearing house for the interchange of information respecting the plans and methods of organization developed by the various member societies.
2. To act as a bureau of research and information to study and report on various civic problems in the solution of which the technical knowledge of professional people is of value.
3. To educate the public with respect to the aims of the member professions and the value of high grade professional service.
4. To cooperate in securing and maintaining legal and ethical standards of character and education requisite to the rendering of high grade professional service.
5. To cooperate with the proper legal authorities in the enforcement of professional laws.
6. To cooperate in promoting plans for the advancement of the material welfare of the member professions.
7. To promote the organization of county and district federations for the carrying out of the objectives outlined above.

The Executive Council has worked very actively the past two years, holding five or six meetings between sessions to review problems of the member groups and arrive at procedures for their solution.

Each year one of the member groups is host to the association during its own annual meeting, providing an interprofessional program at one session. This fall the nurses will be hostesses and have arranged for an international night program with Mr. Hew Roberts, of the State University of Iowa, as guest speaker. The date is October 19; the place, the Hotel Roosevelt in Cedar Rapids. Members of the six professions are cordially invited to attend this banquet and interprofessional, international program.

Next spring the Iowa State Medical Society will be host to the association. Tuesday afternoon, April 25, has been set aside as interprofessional afternoon, and an interesting program will be arranged.

The possibilities inherent in close interprofessional cooperation are great, and in Iowa we seem to benefit year by year in greater degree from the organization.

Medical-Pharmaceutical Cooperation

The professions of medicine and pharmacy have many interests in common; each depends on the other for maximum efficiency in carrying out its own objectives. Both professions, as a matter of fact, have much the same goal, the alleviation and cure of disease. The physician through his schooling is trained to diagnose and prescribe treatment; the pharmacist is trained to compound prescriptions accurately, and as a business man he makes himself responsible for carrying an adequate and up-to-date stock of drugs.

In the past, physician-dispensing has caused the pharmacists much concern, while across-the-counter prescribing by pharmacists in turn has disturbed the physicians. Both practices still exist today in some communities, and they are the source of friction and misunderstanding between the two groups. Iowa, unfortunately, leads the nation with the greatest percentage of dispensing physicians. A survey in 1947 showed that 66 per cent of Iowa physicians dispense. A new development which has caused concern to the pharmacists is the growth of clinic pharmacies owned and operated by groups of physicians.

As if these factors weren't enough of a disturbing element, there is added the misunderstanding about prescription writing and refilling which has come about as a result of the Federal Food, Drug and Cosmetic Act. The Council on Pharmacy and Chemistry of the American Medical Association published a statement on prescription writing in the August 6, 1949, issue of the *Journal of the American Medical Association*, which reads in part as follows:

"In more recent years there have been developed laws that affect the prescribing and dispensing habits of physicians and pharmacists. In earlier years, with the exception of narcotics, the majority of drugs that were used by physicians were not subject to many restrictions, and it was customary to regard with considerable leniency oral prescriptions for drugs and refilling of written prescriptions without specific authorization. During the past few years, state laws have been developed which prohibit the issuance of certain drugs without prescription. In addition, there is the Federal Food, Drug and Cosmetic Act, the provisions of which are not yet familiar to all members of the medical profession, but which, nevertheless, are intimately concerned with the use of drugs. Furthermore, new interpretations are being placed on these provisions, so that it is necessary for members of the medical profession to be fully aware of current restrictions on prescribing and dispensing habits if they wish to

avoid or refrain from encouraging violations of this federal law.

"While the Federal Food, Drug and Cosmetic Act has been regarded by many who are not familiar with its provisions as being concerned essentially with questions of accurate labeling, prevention of adulteration and safety, its provisions, on the basis of recent court decisions and interpretations of the Food and Drug Administration, go beyond such concepts. Among the restrictions placed on prescribing and dispensing habits are several concerned with so-called prescription items and refills. The physician must have a proper understanding of these restrictions if he is to prevent misunderstanding and perhaps even embarrassment for himself or for his patients and the pharmacists who fill his prescriptions."

The situation is not at all insoluble, and the Iowa Pharmaceutical Association has taken the lead in attempting to bring about closer understanding and cooperation between doctors and pharmacists. A joint meeting of the two groups was held in Pottawattamie County about a month ago, at which time the provisions of the Food, Drug and Cosmetic Act were explained. Following this explanation, the druggists and physicians worked out methods of procedure which would work most efficiently for them. Members of the Pottawattamie County Medical Society have expressed their satisfaction with the meeting and its outcome.

The State Society through its field secretary is now cooperating with the Iowa Pharmaceutical Association in arranging similar county or district meetings of physicians and pharmacists throughout the state, and it is hoped that results will compare favorably with the Pottawattamie County meeting.

In addition, through the Iowa Interprofessional Association, a committee of three physicians and three pharmacists has been appointed to draw up a code of ethics which can be approved and adopted by both state associations. This, too, should help bring about a better spirit of cooperation and understanding between the two groups.

The World Medical Association

The World Medical Association, organized in Paris, September 1947, is composed of the national medical associations of the world. At the present time 40 national medical associations are members. Eventually it is believed that 60 associations will belong, comprising 500,000 doctors.

Its objectives are:

1. To promote closer ties among national medical associations and doctors.

2. To maintain the honor and protect the interests of the medical profession.
3. To study and report on professional problems.
4. To organize an exchange of information on matters of interest to the medical profession.
5. To present the world medical opinion to WHO and UNESCO.
6. To assist all people of the world to attain the highest possible level of health.
7. To promote world peace.

Many persons are confused over the relationship of the World Medical Association and the World Health Organization. The World Medical Association represents the doctors and the national medical associations and has only professional memberships. It is concerned with medical care, medical standards in education and training, and insuring unrestricted medical research. The World Health Organization is a subsidiary of the United Nations and represents the governments in the field of medicine, more particularly in its public health aspects.

The World Health Organization cannot carry out its objectives without the support of the doctors. Hence both organizations are necessary and must work in cooperation. While the World Health Organization receives its financial support from government funds, the World Medical Association receives financial support only from dues paid by member associations. These funds are inadequate to carry out the aims of the Association.

Consequently, there has been formed a United States Committee of the World Medical Association whose purpose is to lend financial support to the World Medical Association in carrying out these objectives pertaining to the furthering of world medicine, world health and world peace from the educational and scientific standpoints. Dr. Louis H. Bauer, chairman of the Board of Trustees of the American Medical Association, is secretary-treasurer of the United States Committee.

About \$100,000 a year is required to carry out the work of the United States Committee. Various medical, semiprofessional and pharmaceutical organizations are contributing, but in addition the help of individual doctors is needed. The cost of an individual membership is \$10 a year, with the understanding that membership will be continued for five years unless the doctor notifies the Committee that he does not desire to continue his membership. For this he will receive a certificate of membership, the World Medical Association

Bulletin (quarterly publication), all publications of the Association, and letters of introduction to foreign medical associations if he travels in other countries.

The Iowa State Medical Society has been asked to procure as many members as possible in order to carry on the work of the Association. Application blanks may be obtained from the office, 505 Bankers Trust Building, Des Moines.

Cortisone

The rather unusual results obtained in the treatment of severe arthritis, as reported by the press, following the use of cortisone (dehydro-corticosterone, designated as compound E) at medical centers, especially the Mayo Clinic, have stimulated great interest in the public and among members of the medical profession. Unfortunately, it will probably be at least a year before supplies of this drug will be available for treatment.

In the treatment of rheumatoid arthritis a combined program of gold, physiotherapy, removal of foci of infection, rest and nutritious diet has provided striking results in no more than 15 per cent of cases. Yet, it is known that frequently in jaundice or in pregnancy definite articular remissions have been noted in 60 to 90 per cent of the cases. This latter phenomenon indicated that some basic biochemical disturbance was responsible for rheumatoid arthritis rather than some microbe. It was postulated that the adrenal hormone might be the antirheumatoid substance. Use of this compound prepared from the adrenal gland of swine and cattle afforded dramatic relief to patients with severe, chronic polyarticular rheumatoid arthritis of five years' duration. When the drug was discontinued, the symptoms and signs of arthritis usually, but not always, returned or increased promptly.

Inasmuch as the preparation of compound E was based on the availability of the adrenal gland as obtained from packing houses, the supply was necessarily limited. Subsequently it was discovered that cortisone might be prepared from bile acid. More recently there appears to be an additional source of this drug from Mexican yams and from an African variety of *strophanthus* seed.

It is expected that every effort will be made to provide cortisone from all known sources as expeditiously as possible. In the meantime it is well not to lose sight of the fact that physical medicine is still able to afford considerable relief to patients suffering from the rheumatoid diseases.

Hospital Administration

As pointed out by T. Stewart Hamilton, M.D.,* hospital administration as a medical specialty would appear to be disappearing. It is generally recognized that the hospital administrator who is a physician holds a technical advantage over lay administrators. Few physicians, however, even consider such a position as a career.

It is immediately apparent that the hospital administrator is subject to numerous disadvantages. He is not in business for himself and is subject to dismissal. His income is limited compared to that of a physician in some other specialty. He must adjust himself to the personalities of trustees, staff, personnel and patients. He must operate a business. He sits on the sidelines and watches the game being played.

Conversely, there are numerous advantages. He has an instrumental share in an enterprise greater than is possible, except in rare instances, in practice. His income is steady, his contacts are pleasant, and his hours of work are better than those of most physicians. Also, should he need it, he has counsel available.

Moreover, as director of the hospital today, the physician, perhaps even as much as the public health officer, represents to his community the general field of health. He serves on committees and organizations; he speaks to groups. Since he is not in practice, he can take a much more active part in this phase of community life without fear of being unethical. As health has joined food, clothing and shelter to become the fourth necessity of life, so it is increasingly important that the story of health services be properly presented to an interested public. The hospital director is constantly called upon to perform this civic duty.

The administration of the hospitals in this country is being taken over more and more by able lay administrators. This is not because medical administrators are so poor, but because they are so few. Given other qualities that are equal, it seems logical that, since a hospital's prime reason for existence is care of the sick, a man with a medical background should make a better hospital administrator than one without. In the interests of the future of hospitals, therefore, and in the interests of medicine as well, it behooves physicians to keep the opportunities of this too often forgotten specialty before themselves and before those who follow them. While recognizing the importance of having able laymen in the field of hospital administration, they should reverse the trend of decline of hospital administration as a specialty chosen by physicians. The first step in

such a program is to present the specialty for consideration to medical students, interns and residents.

UNICEF

By the unanimous vote of the United Nations' General Assembly on Dec. 11, 1946, the International Children's Emergency Fund was established for the relief and rehabilitation of children in countries that had suffered from aggression and for child health purposes generally. Now in its third year of operation, the fund is bringing aid to children in Europe, Asia, North Africa, the Middle East and South America.

One of its functions has been helping to provide a daily supplementary meal or school luncheon, consisting of the protective foods: milk, fats and fish-liver oil, and sometimes meat and fish. This is matched in caloric value by the governments or voluntary agencies of the assisted countries. In all, this meal amounts to only 400 to 600 calories, much less than the standard school luncheon in more prosperous countries. Moreover, it is provided for only 6 per cent of the children in the assisted countries.

The great value of this UNICEF contribution is that it provides the foods, particularly milk, which are needed by growing children but are still in extremely short supply in the assisted countries. The dairy herds cannot be brought back to their prewar levels until the early 1950's, and in some of the countries even more time will be needed. UNICEF is also assisting in developing programs to ensure the best possible use of the present milk supplies.

UNICEF has also provided quantities of raw materials, the respective governments of the assisted countries bearing the cost of their manufacture into clothing, shoes and institutional supplies, which are distributed free. The amount available from the fund for this purpose is small in comparison with the need for help of this kind.

In an effort to check the spread of tuberculosis among children—the most serious postwar problem—UNICEF has joined forces with the Danish Red Cross and its Scandinavian associates in a new antituberculosis vaccination program based on the use of BCG (*Bacillus Calmette-Guerin*), a vaccine developed in the early part of this century which reduces the chances of infection by 80 per cent and costs only a few cents for each child. Other activities of UNICEF include programs for the eradication of syphilis among pregnant women and infants, antimalaria control and other insect-borne diseases, and in a limited way in the use of streptomycin. Assistance is also being

*Hospital Administration as a Medical Specialty. *New England J. Med.*, ccxli:202-204 (Aug. 4) 1949.

given towards strengthening the child health and welfare services in these countries.

UNICEF is supported mainly by direct contributions from governments on a voluntary basis. By June 1949, 32 governments had contributed approximately \$86,000,000, accounting for 65 per cent of the fund's resources. The United States, with its government contribution of \$62,000,000, on a matching basis of \$2.57 for every \$1 from other governments, is by far the largest contributor. In addition, \$32,000,000 has been received from the residual assets of the United Nations Relief and Rehabilitation Administration and the equivalent of \$11,000,000 from voluntary contributions, for the most part through the 1948 United Nations Appeal for Children.

The guiding principles of this international operation are: (1) Aid must be given without discrimination because of race, creed, nationality or political consideration. (2) UNICEF's contribution must be matched by the government or some voluntary agency within the country. (3) The fund's aid must be used to make a permanent contribution to child welfare.

The children are reached through organized centers—schools, nurseries, clinics, hospitals and other institutions. In the European countries by far the largest number—70 per cent—are reached in schools, for the reason that by and large the school age group is most in need. The younger children and those in institutions commonly benefit from special measures taken on their behalf by the governments or voluntary agencies both within and without the country. This concentration on the school group makes for expeditious handling and distribution of UNICEF supplies on the fairest possible basis in terms of the children's needs.

PROGRAM

IOWA INTERPROFESSIONAL ASSOCIATION

Roosevelt Hotel—Cedar Rapids, Iowa
Wednesday, October 19, 1949
6:30 p. m.

Hostesses—Iowa State Nurses' Association
Theme of Program—International Night
Speaker—Mr. Hew Roberts, State University of Iowa

Dinner reservations must be made by October 5 with the Iowa State Nurses' Association, 503 Shops Building, Des Moines 9, Iowa. All doctors, dentists, pharmacists and veterinarians are cordially invited to attend.

ONE DAY POSTGRADUATE COURSE FOR GENERAL PRACTITIONERS

On Saturday, November 12, the faculty of the College of Medicine of the State University of Iowa is offering a one day postgraduate course for general practitioners. This is sponsored by the Iowa Chapter of the American Academy of General Practice. The program is as follows:

- | | | |
|-------------|---|------------------------|
| 9:30-11:00 | Recent Advances in the Treatment of Cardiac Decompensation | Lewis E. January, M.D. |
| 11:00-12:30 | Peptic Ulcer | Nathan A. Womack, M.D. |
| | Differential Diagnosis in Carcinoma of the Lung | Johann Ehrenhaft, M.D. |
| 12:30- 1:30 | Luncheon—Doctors' Dining Room | |
| 1:30- 2:30 | Recent Advances in Obstetrical Analgesia and Anesthesia | Obstetrical Staff |
| 2:30- 3:30 | Common Pediatric Problems Encountered by the Practicing Physician | Pediatric Staff |
| 3:30- 4:30 | Common Skin Diseases Encountered by General Practitioners (Kodachrome Slide Illustration) | Robert G. Carney, M.D. |

All members of the American Academy of General Practice are urged to attend, and all other general practitioners in the state are cordially invited.

DIRECTIONS FOR PHYSICIANS IN REGISTRATION OF DEATHS

1. Prepare and sign the medical certification section of the death certificate.
 2. Return the signed death certificate to the funeral director *promptly* so that the funeral director can file it with the local registrar within 72 hours, as required by law.
 3. Know the state and local registrations regarding responsibility for medical certification when death was due to mining accident or occurred without medical attendance. Cases of this type are referred to the county coroner for medical certification.
 4. Cooperate with the state registrar by prompt reply to his queries concerning any entries on the medical certification.
- The attending physician can contribute to good registration by reporting to the local or state registrar of vital statistics deaths which have not been registered.

Accurate mortality data can be obtained only from the facts reported by the physician. Therefore, he should feel that it is an obligation to his community and his profession to report the causes of death to the best of his knowledge and belief.

NEWS NOTES

from the

Committee on Medical Service and Public Relations

An Appreciation of Dr. Ernest E. Shaw

The Iowa State Medical Society lost one of its most loyal workers, and the doctors of the state a good friend, when Ernest Shaw died Saturday morning, August 27. Only 57 years of age, he had nevertheless contributed much to organized medicine. In the depression years of the thirties

posed to set up an insurance plan in several Iowa counties to take care of farm families under its care, Dr. Shaw again gave a great deal of time and study to the problem and helped both the counties and the FSA work out a satisfactory arrangement.

He helped in the organization of Blue Cross and served on its first board of directors. Only the fact that he was in service prevented him from being active in the establishment of Blue Shield, because he was always intensely interested in making good medical care available for the people of the state, and he realized the need for modernizing the old time financial relationship between physician and patient in accord with changing economic conditions.

Dr. Shaw was elected an alternate delegate to the American Medical Association in 1941 and served in 1941 and 1942, attending the meetings held in those years because he was greatly interested in organized medicine. In the summer of 1942 he offered his services to the medical corps of the Army. He was commissioned captain and sent to Fort Sill, Okla., later being transferred to Panama, where he served for the duration of the war. He was honorably discharged as major in December 1945 and immediately resumed not only his practice in Indianola but the burdens of medical organization. He was re-elected alternate delegate to the American Medical Association and in April 1949 was named delegate and attended the June meeting. He was also appointed to the new Committee on Medical Service and Public Relations, where he first concentrated on the problems of rural health. Eventually his interest swung over to that of general practice, which is inextricably bound up with any problem of rural health. He served as the first chairman in Iowa for the American Academy of General Practice and in this capacity worked for enrollment of eligible physicians and for their advancement and recognition. Hand in glove with this goes the matter of undergraduate and postgraduate training for the general practitioner, and at the time of his death Dr. Shaw was cooperating with the College of Medicine of the State University of

(Continued on page 499)



Dr. Shaw served on the Medical Economics Committee, working valiantly to help every county in the state procure a satisfactory contract with the county boards of supervisors for care of the indigent. He made many trips to medical societies to help them with their negotiations, and his wide acquaintance with so many communities made his advice invaluable. There is no question but what his wide fund of knowledge made many boards of supervisors listen to him with respect and enabled the county society to secure an equitable fee.

When the Farm Security Administration pro-

SPEAKERS BUREAU

HAROLD MARGULIES, M.D., *Chairman*

JOHN I. MARKER, M.D., Davenport

HORACE M. KORNS, M.D., Dubuque

ROBERT N. LARIMER, M.D., Sioux City

JAMES H. ALLEN, M.D., Iowa City

CHARLOTTE FISK, M.D., Des Moines

FRANK R. PETERSON, M.D., Cedar Rapids

The Speakers Bureau has almost completed its plans for the entire fall program of medical meetings. This has required a great amount of work including voluminous correspondence.

Listed below are the various meetings, with almost all plans final. Only a few speakers are still tentative. This should offer a splendid opportunity for all the physicians in Iowa to learn from capable, qualified lecturers.

HEART AND CHEST INSTITUTE

This is the third in the series of heart and chest institutes sponsored by the Iowa Tuberculosis and Health Association, the Tuberculosis Division of the State Department of Health and the Iowa Heart Association.

Des Moines

Wednesday, October 19

Hotel Savery

Lee F. Hill, M.D., Program Chairman

Surgery of the Lung

John B. Grow, M.D., Denver, Colo.

Pathogenesis of Tuberculosis

Robert G. Bloch, M.D.,

University of Chicago, Ill.

Bronchiectasis and Bronchography

Herbert W. Schmidt, M. D.,

Mayo Clinic, Rochester, Minn.

Recent Advances in Coronary Disease

Louis N. Katz, M.D., Chicago, Ill.

CANCER INSTITUTES

These cancer institutes are made possible through the Cancer Division of the State Department of Health and the Iowa Division of the American Cancer Society. The schedule is as follows:

Centerville—Thursday, September 22

Eugene F. Ritter, M.D., Program Chairman

Carcinoma of the Lung

Stanley Friesen, M.D.,

University of Kansas, Kansas City.

Malignant Diseases of the Small Intestine

George Oliver Miles, M.D.,

University of Kansas, Kansas City.

The Treatment of Malignant Diseases of the Blood Stream

Herbert C. Wiegand, M.D.,

Washington University, St. Louis, Mo.

Carcinoma of the Uterus

John Hammond Randall, M.D.,

University of Iowa, Iowa City.

Burlington—Tuesday, October 11

Forest H. Coulson, M.D., Program Chairman

Cancer of the Uterus

Ralph E. Campbell, M.D.,

University of Wisconsin, Madison.

Cancer of the Skin

Sture A. M. Johnson, M. D.,

University of Wisconsin, Madison.

Treatment of Malignant Diseases of Blood Stream

Matthew Block, M.D.,

University of Chicago, Ill.

Cancer of the Stomach

Speaker not yet scheduled

Atlantic—Wednesday, October 12

John F. Moriarty, M.D., Program Chairman

Cancer of the Lungs

Daniel F. Crowley, Jr., M.D., Des Moines

Cancer of the Pancreas

Maurice H. Stauffer, M.D.,

Mayo Clinic, Rochester, Minn.

Malignant Diseases of Skin

Speaker not yet scheduled

Malignant Neoplasms of the Kidneys (tentative)

Speaker not yet scheduled

Clarinda—Thursday, October 13

Frederick S. Sperry, M.D., Program Chairman

Treatment of Malignant Blood Diseases

Philip Loge, M.D.,

Washington University, St. Louis, Mo.

Malignancies of the Urinary Tract

Edwin Davis, M.D.,

University of Nebraska, Omaha.

Malignant Skin Diseases

Robert G. Carney, M.D.,

University of Iowa, Iowa City.

Cancer of the Uterus

William F. Hovis, Jr., M.D., Milwaukee, Wis.

Algona—Tuesday, October 18

John M. Schutter, M.D., Program Chairman

Cancer of the Skin

Richard J. Steves, M.D., Des Moines

Cancer of the Liver and Biliary Tract

Robert Howard, M.D.,

University of Minnesota, Minneapolis.

Cancer of the Prostate

Edward N. Cook, M.D.,

Mayo Clinic, Rochester, Minn.

Cancer of the Uterus

Robert M. Collins, M.D.,

University of Nebraska, Omaha.

Decorah—Thursday, October 20*Reinert N. Svendsen, M.D., Program Chairman***Cancer of the Rectum**

Newton D. Smith, M.D.,
Mayo Clinic, Rochester, Minn.

Recent Progress in the Knowledge of Cancer

Harold P. Rusch, M.D.,
University of Wisconsin, Madison.

Cancer of the Chest

Speaker not yet scheduled,
Marquette University, Milwaukee, Wis.

Cancer of the Cervix and Uterus

John L. McKelvey, M.D.,
University of Minnesota, Minneapolis.

Clinton—Thursday, November 3*Henry J. Heusinkveld, M.D., Program Chairman***Newer Treatment of Malignant Diseases of the Blood**

Talbert Cooper, M.D.,
Mayo Clinic, Rochester, Minn.

Cancer of the Prostate

John B. Wear, M.D., Madison, Wis.

Uses of X-Ray and Radio-Active Substances in the Treatment of Cancer

H. Dabney Kerr, M.D.,
University of Iowa, Iowa City.

Common Forms of Skin Cancer

Adolph H. Conrad, Jr., M.D., St. Louis, Mo.

Grinnell—Tuesday, November 8*Edwin S. Korfmacher, M.D., Program Chairman***Cancer of the Prostate**

Laurence F. Greene, M.D., Mayo Clinic, Rochester, Minn.

X-Ray and/or Radio-Active Substances in the Treatment of Malignant Diseases

Speaker not yet scheduled

Cancer of the Lung

Leon J. Galinsky, M.D., Des Moines.

Carcinoma of the Gastro-Intestinal Tract

Speaker not yet scheduled

Cherokee—Thursday, November 10*Harmon D. Seely, M.D., Program Chairman***Cancer of the Prostate**

Speaker not yet scheduled

Carcinomas of the Skin

Speaker not yet scheduled

Carcinomas of the Gastro-Intestinal Tract

Speaker not yet scheduled

Carcinomas of the Lungs

Speaker not yet scheduled

POSTGRADUATE COURSES**Wapello County—Ottumwa***Elias B. Howell, M.D., Program Chairman***September 29—Surgical Management of Cholecystitis**

Harry H. McCarthy, M.D., Omaha, Neb.

October 27—Infant Mortality and Child Nutrition—Controllability of Growth

Julian Boyd, M.D.,
University Hospitals, Iowa City.

November 17—Prolonged Labor

Harold L. Gainey, M.D., Kansas, City, Mo.

December 15—Diagnosis and Treatment of Peptic Ulcer

Alonzo L. Jenks, Jr., M.D., Des Moines.

January 26—Management of Acute Craniocerebral Trauma

Russell Meyers, M.D., University Hospitals, Iowa City.

Plymouth County—LeMars*W. L. Downing, M.D., Program Chairman***September 28—Management of Difficult Labors**

William B. Stromme, M.D., Minneapolis, Minn.

October 5—Treatment of Meningitis in Children

George Klok, M.D., Council Bluffs.

October 12—Management of Acute Abdominal Disorders

C. B. McVay, M.D., Yankton, S.D.

October 19—Treatment of Congestive Heart Disease

W. D. Paul, M.D., Iowa City.

October 26—Cancer of the Large Bowel

Charles W. McLaughlin, Jr., M.D., Omaha, Neb.

Montgomery County—Red Oak*Oscar Alden, M.D., Program Chairman***October 6—Peptic Ulcer**

Howard Down, M.D., Raymond Hammer, M.D., and
Philip Pugh, M.D., Sioux City.

October 13—Uses of Endocrine Substances in Obstetrics and Gynecology

A. B. Sinclair, Jr., M.D., Kansas City, Mo.

October 20—Meningitis in Children

Charlotte Fisk, M.D., Des Moines.

October 27—Diagnosis and Treatment of Coronary Thrombosis

F. Lowell Dunn, M.D., Omaha, Neb.

November 3—Differential Diagnosis of Acute Abdominal Diseases

Carl E. Lischer, M.D., St. Louis, Mo.

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Tuesdays at 11:45 a. m.

WOI—Thursdays at 11:15 a. m.

October 4-6 Prenatal Care

Harold J. Roddy, M.D.,
Mason City

October 11-13 Obstetric Anesthesia

Douglas Eastwood, M.D., and
Stuart Cullen, M.D., Iowa City

October 18-20 Rheumatoid Arthritis

Gerald F. Keohen, M.D.,
Dubuque

October 25-27 Nonrheumatoid Arthritides

Ralph D. Hunting, M.D.,
Cedar Rapids

COUNTY MEDICAL SOCIETY OFFICERS

COUNTY	PRESIDENT	SECRETARY	DEPUTY COUNCILOR
Adair.....	Ralph DeCicco, Greenfield.....	A. S. Bowers, Orient.....	A. S. Bowers, Orient
Adams.....	C. L. Bain, Corning.....	J. C. Nolan, Corning.....	A. W. Brunk, Prescott
Allamakee.....	J. W. Myers, Postville.....	C. R. Rominger, Waukon.....	J. W. Thornton, Lansing
Appanoose.....	R. R. Edwards, Centerville.....	E. F. Ritter, Centerville.....	E. A. Larsen, Centerville
Audubon.....	L. E. Jensen, Audubon.....	H. K. Merselis, Audubon.....	L. E. Jensen, Audubon
Benton.....	G. R. Woodhouse, Vinton.....	L. W. Koontz, Vinton.....	N. B. Williams, Belle Plaine
Black Hawk.....	D. W. Bickley, Waterloo.....	F. G. Loomis, Waterloo.....	A. J. Joynt, Waterloo
Boone.....	R. L. Wicks, Boone.....	H. C. Scharnweber, Boone.....	J. O. Ganoes, Ord
Bremmer.....	O. C. Hardwig, Waverly.....	W. C. Wildberger, Waverly.....	F. R. Sparks, Waverly
Buchanan.....	J. F. Loock, Independence.....	R. L. Knipfer, Jesup.....	J. W. Barrett, Jr., Independence
Buena Vista.....	T. R. Campbell, Sioux Rapids.....	R. E. Mailliard, Storm Lake.....	H. E. Farnsworth, Storm Lake
Butler.....	E. M. Mark, Clarksville.....	F. F. McKean, Allison.....	Bruce Ensley, Shell Rock
Calhoun.....	P. W. Van Metre, Rockwell City.....	C. E. Knouf, Lake City.....	W. W. Weber, Pomeroy
Carroll.....	V. T. Lindsay, Glidden.....	L. H. Kuker, Carroll.....	W. L. McConkie, Carroll
Cass.....	M. T. Petersen, Atlantic.....	J. F. Moriarty, Atlantic.....	
Cedar.....	Fred Montz, Lowden.....	J. E. Smith, Clarence.....	P. M. Hoffman, Tipton
Cerro Gordo.....	L. W. Swanson, Mason City.....	J. W. Lannon, Mason City.....	G. J. Sartor, Mason City
Cherokee.....	D. C. Koser, Cherokee.....	H. D. Seely, Cherokee.....	C. H. Johnson, Cherokee
Chickasaw.....	E. C. O'Connor, New Hampton.....	P. C. Richmond, New Hampton.....	P. E. Gardner, New Hampton
Clarke.....	F. S. Bowen, Woodburn.....	C. R. Harken, Osceola.....	H. E. Stroy, Osceola
Clay.....	C. C. Jones, Spencer.....	D. H. King, Spencer.....	C. C. Jones, Spencer
Clayton.....	A. R. Powell, Elkader.....	T. W. Lichter, Edgewood.....	P. R. V. Hommel, Elkader
Clinton.....	V. W. Petersen, Clinton.....	May Danielson, Clinton.....	R. F. Luse, Clinton
Crawford.....	R. A. Huber, Charter Oak.....	C. Dudley Miller, Denison.....	C. L. Sievers, Denison
Dallas-Guthrie.....	F. A. Wilke, Perry.....	C. A. Nicoll, Panora.....	
Davis.....	Richard Schoonover, Bloomfield.....	H. C. Young, Bloomfield.....	C. H. Cronk, Bloomfield
Decatur.....	F. A. Bowman, Leon.....	E. E. Gamet, Lamoni.....	F. A. Bowman, Leon
Delaware.....	Paul Stephen, Manchester.....	R. E. Clark, Manchester.....	
Des Moines.....	W. R. Lee, Burlington.....	R. D. Allen, Burlington.....	F. G. Ober, Burlington
Dickinson.....	J. J. Buchanan, Milford.....	R. F. Wolcott, Spirit Lake.....	T. L. Ward, Arnolds Park
Dubuque.....	R. P. Rusk, Dubuque.....	R. D. Storck, Dubuque.....	J. C. Painter, Dubuque
Emmett.....	J. B. Knipe, Armstrong.....	Hugo Lindholm, Armstrong.....	S. C. Kirkegaard, Estherville
Fayette.....	C. C. Hall, Maynard.....	M. G. Beddoes, Oelwein.....	C. C. Hall, Maynard
Floyd.....	R. W. Stober, Charles City.....	E. V. Ayers, Charles City.....	R. A. Fox, Charles City
Franklin.....	W. R. Arthur, Hampton.....	W. W. Taylor, Sheffield.....	J. C. Powers, Hampton
Fremont.....	Ralph Lovelady, Sidney.....	A. E. Wanamaker, Hamburg.....	A. E. Wanamaker, Hamburg
Greene.....	P. E. Lohr, Churдан.....	E. D. Thompson, Jefferson.....	L. C. Nelson, Jefferson
Grundy.....	H. V. Kahler, Reinbeck.....	C. H. Bartruff, Reinbeck.....	W. O. McDowell, Grundy Center
Hamilton.....	J. L. Ptacek, Webster City.....	B. F. Howar, Webster City.....	M. B. Galloway, Webster City
Hancock-Winnebagos.....	D. F. Shaw, Britt.....	I. E. Brown, Forest City.....	C. V. Hamilton, Garner
Hardin.....	E. J. Steenrod, Iowa Falls.....	F. N. Cole, Iowa Falls.....	G. F. Dolmage, Buffalo Center
Harrison.....	C. W. Byrnes, Dunlap.....	Hans Hansen, Logan.....	F. N. Cole, Iowa Falls
Henry.....	B. D. Hartley, Mt. Pleasant.....	J. R. Beebe, Mt. Pleasant.....	F. H. Hanson, Magnolia
Howard.....	F. E. Giles, Cresco.....	C. W. Ahl, Cresco.....	J. S. Jackson, Mt. Pleasant
Humboldt.....	N. E. T. Schultz, Humboldt.....	A. S. Arent, Humboldt.....	I. T. Schultz, Humboldt
Ida.....	E. H. Heilman, Ida Grove.....	J. B. Dressler, Ida Grove.....	E. S. Parker, Ida Grove
Iowa.....	D. F. Miller, Williamsburg.....	J. J. Sinn, Williamsburg.....	I. J. Sinn, Williamsburg
Jackson.....	J. J. Tilton, Bellevue.....	J. E. Swegart, Maquoketa.....	F. J. Swift, Maquoketa
Jasper.....	J. W. Ferguson, Newton.....	J. R. Singer, Newton.....	R. W. Wood, Newton
Jefferson.....	L. N. Tidrow, Fairfield.....	Robert A. Ryan, Fairfield.....	J. N. Crow, Fairfield
Johnson.....	R. T. Tidrick, Iowa City.....	R. C. Hardin, Iowa City.....	G. C. Albright, Iowa City
Jones.....	K. D. Paul, Anamosa.....	R. W. Myers, Monticello.....	T. M. Redmond, Monticello
Keokuk.....	C. L. McGuire, Keota.....	John Maxwell, What Cheer.....	D. L. Grothaus, Delta
Kossuth.....	C. H. Cretzmeyer, Algona.....	M. G. Bourne, Algona.....	J. G. Clapsaddle, Burt
Lee.....	R. E. Cooper, Keokuk.....	H. T. Werner, Ft. Madison.....	R. L. Feightner, Fort Madison
Linn.....	D. S. Challed, Cedar Rapids.....	John Parke, Cedar Rapids.....	G. H. Ashline, Keokuk
Louisa.....	E. S. Groben, Columbus Junction.....	J. H. Chittum, Wapello.....	B. F. Wolverton, Cedar Rapids
Lucas.....	H. D. Jarvis, Chariton.....	R. E. Anderson, Chariton.....	J. H. Chittum, Wapello
Lyon.....	A. C. Wubben, Rock Rapids.....	S. H. Cook, Rock Rapids.....	L. Throckmorton, Chariton
Madison.....	G. J. Anderson, Winterset.....	P. F. Chesnut, Winterset.....	S. H. Cook, Rock Rapids
Mahaska.....	M. R. Greenlee, Oskaloosa.....	R. M. Collison, Oskaloosa.....	C. B. Hickenlooper, Winterset
Marion.....	F. M. Roberts, Knoxville.....	D. S. Burbank, Pleasantville.....	E. B. Wilcox, Oskaloosa
Marshall.....	R. C. Carpenter, Marshalltown.....	H. E. Sauer, Marshalltown.....	H. L. Bridgeman, Knoxville
Mills.....	W. A. DeYoung, Glenwood.....	T. E. Shonka, Malvern.....	A. D. Woods, State Center
Mitchell.....	W. E. Owen, St. Ansgar.....	C. F. Watson, Stacyville.....	D. W. Harman, Glenwood
Monona.....	L. A. Gaukel, Onawa.....	P. L. Wolpert, Onawa.....	T. S. Walker, Riceville
Monroe.....	H. J. Richter, Albion.....	T. A. Moran, Melrose.....	C. W. Young, Onawa
Montgomery.....	Helge Borre, Red Oak.....	E. M. Sorensen, Red Oak.....	H. J. Richter, Albion
Muscatine.....	K. E. Wilcox, Muscatine.....	R. W. Asthaler, Muscatine.....	Oscar Alden, Red Oak
O'Brien.....	J. C. Peterson, Hartley.....	W. S. Balkema, Sheldon.....	C. P. Phillips, Muscatine
Osceola.....	E. S. Aeltz, Sibley.....	Frank Rizzo, Sibley.....	T. D. Kas, Sutherland
Page.....	C. H. Brush, Shenandoah.....	F. S. Sperry, Clarinda.....	Frank Reinsch, Ashton
Palo Alto.....	J. W. Woodbridge, Emmetsburg.....	W. A. Johnson, Emmetsburg.....	W. H. Maloy, Shenandoah
Plymouth.....	R. J. Fisch, Le Mars.....	L. C. O'Toole, Le Mars.....	H. L. Brereton, Emmetsburg
Pocahontas.....	J. B. Thielen, Ponda.....	C. L. Jones, Gilmore City.....	W. L. Downing, Le Mars
Polk.....	Fred Sternagel, West Des Moines.....	B. M. Merkel, Des Moines.....	C. L. Jones, Gilmore City
Pottawattamie.....	Isaac Sternhill, Council Bluffs.....	S. A. Cohen, Council Bluffs.....	J. B. Synhorst, Des Moines
Poweshiek.....	T. E. Brobyn, Grinnell.....	E. S. Korfmacher, Grinnell.....	G. N. Best, Council Bluffs
Ringgold.....	W. G. Doss, Mount Ayr.....	J. W. Hill, Mount Ayr.....	E. S. Korfmacher, Grinnell
Sac.....	J. W. Gauger, Early.....	C. E. Lierman, Lake View.....	E. J. Watson, Diagonal
Scott.....	E. G. Sentry, Davenport.....	M. J. Brown, Davenport.....	J. R. Dewey, Schaller
Shelby.....	L. W. Savage, Harlan.....	J. H. Spearing, Harlan.....	A. P. Donohoe, Davenport
Sioux.....	L. R. Hegg, Rock Valley.....	C. B. Murphy, Alton.....	Wm. Doornink, Orange City
Story.....	Richard Mordaunt, Nevada.....	W. B. Armstrong, Ames.....	Bush Houston, Nevada
Tama.....	C. R. Roberts, Dysart.....	A. J. Havlik, Tama.....	A. A. Pace, Toledo
Taylor.....	G. W. Rimel, Bedford.....	M. R. Crew, Clearfield.....	G. W. Rimel, Bedford
Union.....	J. G. Macrae, Creston.....	C. E. Sampson, Creston.....	C. C. Rambo, Creston
Van Buren.....	J. T. Worrell, Keosauqua.....	L. A. Coffin, Farmington.....	L. A. Coffin, Farmington
Wapello.....	W. N. Whitehouse, Ottumwa.....	E. B. Hoeven, Ottumwa.....	C. A. Henry, Farson
Warren.....	E. E. Shaw, Indianola.....	C. H. Mitchell, Indianola.....	C. H. Mitchell, Indianola
Washington.....	D. G. Sattler, Kalona.....	W. S. Kyle, Washington.....	C. H. Mitchell, Indianola
Wayne.....	J. H. McCall, Allerton.....	C. F. Brubaker, Corydon.....	E. D. Miller, Wellman
Webster.....	H. T. Larsen, Ft. Dodge.....	D. S. Egbert, Ft. Dodge.....	J. H. McCall, Allerton
Winneshiek.....	J. G. Goggin, Ossian.....	E. F. Hagen, Decorah.....	H. E. Nelson, Dayton
Woodbury.....	E. M. Honke, Sioux City.....	E. H. Sibley, Sioux City.....	L. C. Kuhn, Decorah
Worth.....	S. S. Westly, Manly.....	G. S. Westly, Manly.....	D. B. Blume, Sioux City
Wright.....	R. L. Gorrell, Clarion.....	J. R. Christensen, Eagle Grove.....	S. S. Westly, Manly
			J. H. Sams, Clarion

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ATLAS OF OBSTETRIC TECHNIC—By *Paul Titus, M.D.*, Obstetrician-Gynecologist to the St. Margaret Memorial Hospital, Pittsburgh; Secretary, American Board of Obstetrics and Gynecology. Illustrations by *E. M. Shackelford*, formerly Medical Illustrator, John C. Oliver Memorial Research Foundation, St. Margaret Memorial Hospital, Pittsburgh. Second Edition. St. Louis, The C. V. Mosby Co., 1949. Price \$7.50.

CLINICAL BIOCHEMISTRY—By *Abraham Cantarow, M.D.*, Professor of Biochemistry, Jefferson Medical College; and *Max Trumper, Ph.D.*, Commander, H(S), USNE; Lecturer in Clinical Biochemistry and Basic Science Coordinator, Naval Medical School, National Naval Medical Center, Bethesda, Maryland. Fourth Edition. Philadelphia and London, W. B. Saunders Co., 1949. Price \$8.00.

FUNDAMENTALS OF OTOLARYNGOLOGY: A Textbook of Ear, Nose and Throat Diseases—By *Lawrence R. Boies,*

M.D., Clinical Professor of Otolaryngology, Director of Division of Otolaryngology, University of Minnesota Medical School; and *Associates*. Philadelphia and London, W. B. Saunders Co., 1949. Price \$6.50.

MODERN PRACTICE IN PSYCHOLOGICAL MEDICINE 1949—Edited by *J. R. Rees, M.D.* New York, Paul B. Hoeber, Inc., 1949. Price \$10.00.

OPERATIONS OF GENERAL SURGERY—By *Thomas G. Orr, M.D.*, Professor of Surgery, University of Kansas School of Medicine, Kansas City, Kan. Second Edition. Philadelphia and London, W. B. Saunders Co., 1949. Price \$13.50.

A YEAR WITH OSLER 1896-1897: Notes Taken at his Clinics in The Johns Hopkins Hospital—By *Joseph H. Pratt, M.D.*, Physician-in-Chief, Joseph H. Pratt Diagnostic Hospital, Boston, Mass., a member of the class of 1898. Baltimore, The John Hopkins Press, 1949. Price \$4.00.

BOOK REVIEWS

A-B-C's OF SULFONAMIDE AND ANTIBIOTIC THERAPY

By *Perrin H. Long, M.D., F.R.C.P.*, Professor of Preventive Medicine, The Johns Hopkins University School of Medicine; Physician, The Johns Hopkins Hospital, Philadelphia and London. W. B. Saunders Company, 1948. Price, \$3.50.

This book, as its name implies, is a primer designed to serve as a rule-of-thumb for the practitioner of medicine and surgery. The author has summed up his 12 years of experience with these drugs in a concise form and has included antibiotics of only proved value.

Unfortunately such drugs as aureomycin, chloromycetin and bacitracin, and others which have recently been made available, were only experimental products at the time this book was published, and no data on these valuable drugs are included.

There is a concise discussion of the clinical dosages used in sulfonamide, penicillin, streptomycin and tyrothricin therapy. The preparation of parenteral solutions of these drugs is adequately covered, and the routes of administration are described. The clinical pharmacology of these products is mentioned, and such manifestations as drug resistance and toxicity are covered.

The remaining three quarters of this book is devoted to the clinical applications of sulfonamide and antibiotic therapy. This section is arranged alphabetically and deals with the treatment of practically every infectious condition from abscess and acne to Weil's disease, whooping cough and yaws. The author has obtained the result which he intended to achieve. However, the book suffers from the defect present in most literature on current subjects, i. e. portions of it are outdated by the almost daily advances being made in this important field.

T. D. T.

BLAKISTON'S NEW GOULD MEDICAL DICTIONARY

Editors: *Harold Wellington Jones, M.D., Normand L. Hoerr, M.D., and Arthur Osol, Ph.D.*; With the Cooperation of an Editorial Boards and 80 Contributors. First Edition. Philadelphia and Toronto, The Blakiston Company, 1949. Prices, \$8.50, \$10.75 and \$13.50.

The attempt made in this new dictionary has been to bring medical terms up-to-date, trimming down obsolete material and altering where usage has made a change, as well as to include thousands of new entries. The volume includes terms used in all branches of medicine and allied sciences, including medical physics and chemistry, dentistry, pharmacy, nursing, veterinary medicine, zoology and botany and medicolegal terms.

From the point of view of convenience, the arrangement of the book is excellent, with the entries being printed in boldface type. The subentries, also in boldface type, are set off in indented columnar form which makes each clearly distinguishable as a separate definition. Tabular and statistical material has been segregated in a separate section but is treated as an integral part by references to it; the same is true of the 252 illustrations (129 in color) on 45 plates. Pronunciation is shown by syllable division and accent and, whenever necessary, by a style of phonetic respelling which does not demand the mastering of a complicated series of symbols. The etymology is considered as an extension of and supplement to the definition.

The dictionary is a product of a distinguished staff of more than 100 contributors in medicine, public health and related sciences, and is published by an old established firm. Its publication will be welcomed as an outstanding contribution.

J. N. F.

PAIN SYNDROMES

Treatment by Paravertebral Nerve Block

By *Bernard Judovich*, B.S., M.D., Instructor in Neurology, Graduate School of Medicine, University of Pennsylvania; Physician-in-Charge, Neuralgia Clinic, Graduate Hospital, Philadelphia, Pa.; and *William Bates*, B.S., M.D., F.A.C.S., F.I.C.S., Professor of Surgery, Graduate School of Medicine, University of Pennsylvania; Consulting Surgeon, Babies' Hospital and Philadelphia Home for Incurables; Consulting General Surgeon, Wills Hospital, Philadelphia, Pa. Foreword by *Joseph C. Yaskin*, M.D., Professor of Neurology, Graduate School of Medicine, University of Pennsylvania, Philadelphia, Pa. Third Edition. Philadelphia, F. A. Davis Co., 1949. Price, \$6.00.

This is the third edition of a book formerly called *Segmental Neuralgia in Painful Syndromes*. The subject matter is well covered in 22 chapters. The first few chapters deal with diagnosis, methods of examination and the relation of posture to body discomfort. The benefits obtained from Coley's fluid are, in the opinion of the reviewer, somewhat optimistic. These chapters are followed by numerous illustrations of dermatome patterns which are well done.

Later chapters take up pain syndromes such as brachial plexus neuritis, scalenus syndrome, chest wall neuritis, abdominal pain, backache, sciatica, tenonitis of the hip joint, herpes zoster, occipital and atypical neuralgias. Interposed is a chapter on the pitcher plant distillate and its active principle ammonium salts.

This is followed by a discussion and presentation of the methods used for the control of pain in malignancy. The use of intravenous novocain in painful syndromes is described together with the technic and results that may be expected, followed by a portrayal of infiltration methods extending from the cervical to lumbar areas.

The final chapter considers sympathetic nerve block and describes, in detail, various methods. The authors also point out the unfavorable results that may occur when alcohol is used for the purpose of nerve blocking. They also call attention to the dangers of, and the accidents which may occur during, various types of injections. The authors appear to be somewhat overenthusiastic concerning the use of pitcher plant distillate and ammonium salts for the relief of pain in nerve blocking.

In the reviewer's opinion, this volume is well worthwhile for the neurologist, neurosurgeon and anesthesiologist who are interested in various injection techniques. It would also serve as a guide and source of valuable information for the general practitioner who has occasion to carry out injection procedures for the relief of pain.

H. G. D.

GYNAECOLOGICAL AND OBSTETRICAL ANATOMY

By *C. F. V. Smout*, M.D., M.R.C.S., Assistant Professor, Department of Anatomy, Sub-Dean and Tutor, Faculty of Medicine, University of Birmingham. With chapters on "The Histology of the Female Reproductive Tract and Its Endocrine Control" by *F. Jacoby*, M.D., Ph.D., Lecturer in Histology, Department of Anatomy, University College, Cardiff; Formerly, Department of Physiology, University of Birmingham. Second Edition. London, Edward Arnold & Co., 1948. (Baltimore, Williams and Wilkins Co.) Price, \$11.00.

This book represents a concise, authoritative discussion of obstetric and gynecologic anatomy. At last, in one book is presented a complete review of histology, embryology and anatomy. This fulfills a real need in obstetric and gynecologic literature. This book should be of immense value to residents in obstetrics and gynecology and as a review text for candidates for the American Board. In addition, it should be a useful reference book in hospital libraries for students, nurses and practicing physicians.

W. C. K.

PSYCHODIAGNOSIS

An Introduction to Tests in the Clinical Practice of Psychodynamics

By *Saul Rosenzweig*, Ph.D., Associate Professor, Departments of Psychology and Neuropsychiatry, Washington University, St. Louis, Mo.; Formerly Chief Psychologist, Western State Psychiatric Institute and Clinic, Pittsburgh, Pa. With the Collaboration of *Kate Levine Kogan*, Ph.D., Formerly Senior Clinical Psychologist, Western State Psychiatric Institute and Clinic, Pittsburgh, Pa. New York, Grune & Stratton, 1949. Price, \$5.00.

This volume, written from the teaching and practical diagnostic standpoint, will be of interest to psychiatrists because of its clear presentation of the fields of psychometric and projective techniques. Especially do many of the protocols in their interpretation suggest the dynamic approach to the patient's problem and give material for discussion by the clinical psychiatrist in later interviews with the patient.

This text, which is divided into five parts, was primarily written as an introduction to psychodiagnosis for medical, psychology, social work, nursing and occupational therapy students. However, part four would be stimulating for clinical psychiatrists, as it emphasizes the help that psychiatric social workers and clinical psychologists can give to the understanding of patients.

The personal characteristics listed as desirable for clinical psychologists could be seriously considered as desirable traits in psychiatrists.

J. I. M.

ROENTGEN DIAGNOSIS OF THE EXTREMITIES AND SPINE

(Annals of Roentgenology Vol. XVII.)

By *Albert B. Ferguson, M.D.*, Associate Professor, Orthopedic and Fracture Surgery, Boston University; Consulting Roentgenologist, Children's and Memorial Hospitals, Boston; Formerly Director of Roentgenology, New York Orthopaedic Hospital. Second Edition, Revised and Enlarged. New York, Paul B. Hoeber, Inc., 1949. Price, \$15.00.

Again Dr. Ferguson has presented an improved volume which is becoming more and more accepted as an authority on the x-ray diagnosis of the extremities and spine. This second edition has been improved by the addition of further discussion and illustrations of anomalies in the lumbosacral spine. The section dealing with the interpretation of common bone malignancies has been enlarged. All physicians dealing with the treatment of bone pathology should include this volume in their library.

E. M. G.

CHILD HEALTH SERVICES AND PEDIATRIC EDUCATION

Report of the Committee for the Study of Child Health Services, American Academy of Pediatrics; with the cooperation of the U. S. Public Health Service and the U. S. Children's Bureau. New York, The Commonwealth Fund, 1949. Price, \$3.50.

The full report of the nation-wide survey of child health services and pediatric education in this country has been published. This comprehensive inventory and analysis was sponsored by the American Academy of Pediatrics and is the first such study to be carried out by any medical specialty or for any age group. It represents an analysis of the pediatric activities of physicians and dentists in private practice, the available services and facilities of hospitals and community health agencies (both official and voluntary), and the present status of pediatric education in medical schools and hospitals approved for pediatric residency. The information gained by the survey will play an important part in the planning for the future development of child care and pediatric education in the United States.

Chapters are given to: (1) Total Volume of Child Health Services, (2) Distribution of Physicians and Pediatricians, (3) Physician's Services, (4) Hospitals, (5) Community Health Services, (6) Economic Correlations, and (7) Pediatric Education.

Several outstanding facts stand out from the study as the conclusions of the group who made the study:

(1) There is a need for more physicians who are well trained in the care of children. "This need can be met only by strengthening pediatric education in medical schools and hospitals, for undergraduates and graduates, for general practitioners and specialists."

(2) The same high quality of medical care which now exists in the medical centers must be made available in the remote and rural areas far removed from such centers. Decentralization and regional planning are obvious steps in that direction.

J. E. D.

THE CIBA COLLECTION OF MEDICAL ILLUSTRATIONS

A Compilation of Pathological and Anatomical Paintings Prepared by *Frank H. Netter, M.D.*, Summit, N. J., Ciba Pharmaceutical Products, Inc., 1948. Price, \$6.50.

The *Ciba Collection of Medical Illustrations* represents the work of Dr. Frank Netter, who is both a medical artist and physician. His color illustrations are well known by most physicians. This volume of his work represents his portfolio of illustrations of the past 10 years.

The book is divided into four main sections, dealing with the anatomy, gross and microscopic pathology of diseases, tumors, injuries and conditions involving various organs and tissues of the body, featured in clear, concise and distinct colored drawings. The areas and systems of the body portrayed are (1) lungs and chest, (2) gastrointestinal tract, (3) male reproductive organs and male and female mammary glands, and (4) heart and aorta.

Incorporated on each page are colored drawings of organs or portions of the body detailing the gross anatomy and pathology in situ and radiologic findings in vivid realism. Accompanying these illustrations is an accurate description of the anatomy, pathology, and radiologic findings and a brief discussion of the main features of the lesion portrayed.

This concise condensation of material in color should prove instructive and beneficial to the physician and surgeon.

L. T. P.

THE USES OF PENICILLIN AND STREPTOMYCIN

By *Chester Scott Keefer, M.D.*, Wade Professor of Medicine, Boston University School of Medicine; Director of Evans Memorial, and Physician-in-Chief of the Massachusetts Memorial Hospitals. Porter Lectures, Series 15. Lawrence, Kan., University of Kansas Press, 1949. Price, \$2.00.

This 68 page book is composed of the latest clinical material concerning the use of penicillin and streptomycin. Surgical and medical usage is fully covered along with their side reactions, latest dosages, resistance and effects on specific diseases.

A third chapter covers the history of medicine pertaining to antibiotics from the days of Koch and Pasteur to the time of Fleming and Waksman. The book is well recommended as a complete, yet quick, reference for the general practitioner in the use of these two antibiotics.

H. L. W.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. ROGER M. MINKEL, Fort Dodge

President-elect—MRS. CLAIRE H. MITCHELL, Indianola

Secretary—MRS. IVAN K. SAYRE, St. Charles

Treasurer—MRS. WILLIAM B. CHASE, JR., Des Moines

Corresponding Secretary—MRS. CHARLES H. COUGHLAN, Fort Dodge

LINES FROM THE PRESIDENT

Doctors' wives as members of the Woman's Auxiliary to the Iowa State Medical Society have been doing good work in their own communities. A compilation of activities was requested from each county president for the state records. Is your county represented in the tabulation? If not, won't you please see that Auxiliary Headquarters receive your county record for its files?

Fall is here, and each Auxiliary should be holding regularly scheduled meetings that include members-at-large from surrounding counties. A list of members-at-large may be secured from Auxiliary Headquarters. Programs have been charted, and copies forwarded to county presidents. The objective of the state organization is that "every doctor's wife as an Auxiliary member be a well-informed, educated member." To that end, for the benefit of individual members, we present statements from the chairmen of each standing committee of the state Woman's Auxiliary. These statements are based upon the authorized national program and are equally applicable for state and county Auxiliaries.

Mrs. Roger M. Minkel

BRIEFS FROM COMMITTEE CHAIRMEN

Legislation: Mrs. Cecil C. Jones, Chairman.

Members of the Woman's Auxiliary to the Iowa State Medical Society can be vitally effective in the effort to secure "wise and adequate health legislation" and just as effective in "defeating legislation that is detrimental to the public health." The functions of this committee fall into two classifications:

1. The A.M.A. National Education Campaign—
 - a. Defeating compulsory health insurance.
 - b. Promoting voluntary health insurance.
2. General Legislation on Health and Related Matters—
 - a. Basic science laws.
 - b. Public health measures.
 - c. Measures relating to medical education.
 - d. Local (county or state) medical legislation.

The functions of this committee will be to:

1. Educate every member on pending bills relating to public health and medicine and on the necessity for any corrective legislation.
2. Stimulate every member to strenuously uphold or resist health legislation as the occasion demands.

3. Disseminate all available material on special health legislation.

4. Cooperate actively with the Legislative Committee of the Iowa State Medical Society in any way requested.

National Bulletin: Mrs. Frank D. Edington, Chairman.

A subscription to the *National Bulletin* is imperative for all members who expect to be well informed in the National Auxiliary program regarding legislation, program and public relations. The self-education program of each county president and as many members of her Auxiliary as possible should include a subscription to the *National Bulletin*. The subscription price is \$1.00 per year. Please forward subscriptions immediately.

Organization: Mrs. Howard W. Smith, Chairman.

Mrs. Ralph L. Wicks acted as chairman of the committee which completed the organizing of Boone County Auxiliary in August. The Organization Committee is composed of councilors in the various districts of the state. These women are making a concentrated drive to acquire more members-at-large so that every community will have informed doctors' wives as Auxiliary members. These members will receive the same information as that sent to county presidents.

Program: Mrs. Morris G. Beddoes, Chairman.

This year is a critical one and must be one of study. Though the material is not new, the program must receive greater stress at Auxiliary meetings. A national, state or county program is only as effective as the information it provides for each individual member. "As busy adults, too often we acquire a reading instead of a speaking knowledge of current affairs." It is your duty and privilege to interpret and support the ideals of organized medicine. Though the work of the Program, Legislative and Public Relations Committees may seem to overlap, let us regard each as a means to self-education in our Auxiliary meetings. Self-education will foster better public relations.

We must know the A.M.A.'s answer to President Truman's compulsory health insurance plan. We must know and further the voluntary pre-payment medical and hospital care plans. The Twelve Point Program of the A.M.A. is recommended as good basic material for Auxiliary programs. Let us aim to be 100 per cent informed.

Publications: Mrs. Keith M. Chapler, Chairman.

1. All material intended for publication in "The Woman's Auxiliary News" should be *received* by the chairman not later than the twelfth of each month, as copy must be in the JOURNAL office by the fifteenth in order to meet publication deadlines.
2. When submitting material, please bear in mind that contents of monthly magazines are prepared a month in advance.
3. All material should be *type-written* and *double-spaced* on standard 8½ by 11 inch paper in order to allow space for editing.
4. We urge all members to read "The Woman's Auxiliary News." Keeping informed on national, state and county activities is a very modest contribution to the profession which provides our living.

Public Relations: Mrs. Allan B. Phillips, Mrs. Lloyd K. Shepherd, Co-Chairmen.

Public Relations is literally the relationship of our organization with the public as individuals and in organized groups. The objectives are:

1. To carry on cooperative projects with lay groups which will help to interpret to the public the health needs and problems of modern life.
2. To keep before local community groups the fact that the Iowa State Medical Society and its Auxiliary consider health their major concern.

Our program is to aid the National Education Campaign in securing endorsements, distributing literature, developing speakers' bureaus, fostering the self-education program, participating in the health education projects based on the A.M.A. Twelve Point Program, including nurse recruitment, school health, rural health, local health units, medical research, planning and executing publicity, always under the supervision of the state and county Medical Societies of which we are Auxiliaries.

Student Nurse Loan Fund: Mrs. William R. Hornaday, Chairman.

This fund is entirely dependent upon you as Auxiliary members. As a committee, we cannot act without your support. As the fall semester opens, we have a definite obligation to our girls in training; we cannot let them down. This is the final year for our nurse at Iowa Lutheran and the second for the nurse at Iowa Methodist. How proud we will be when we have helped our first girl toward her career!

We suggest that:

1. If possible, every Auxiliary member contribute her 50 cents as recommended by our Board of Directors. Several counties have already done this, and it is a distinct advantage to have the money in the fall rather than when the school year is nearly over.
2. Auxiliaries promote one project to earn money for this fund.

3. Individual citizens or organizations seeking worthy projects might be interested in contributing to this fund.
4. Donations intended as memorials might be given, and grateful recognition would be sent to the bereaved family.
5. Members keep interested themselves. This is one of our most valuable projects. Let's keep it high-lighted.

Work for the Handicapped: Mrs. James E. Whitmire, Chairman.

Woodbury, Dubuque and Polk County Auxiliaries are completing plans for hobby shows which will provide outlet sales for the handiwork of crippled children and adults of the Iowa Society. An account of the style show at Younkers, in Des Moines, sponsored by the State Auxiliary on September 21, will appear in the next issue. If your Auxiliary is not engaged in such a project, do support the work of nearby counties.

Hygeia: Mrs. James S. Jackson, Chairman.

Hygeia is our authorized method of self-education and education of the laymen. It should be found not only in our homes but in the offices of doctors and dentists and in schools and libraries. Each Auxiliary member is a committee of one to increase subscriptions. Each Auxiliary should participate in the subscription contest. Particulars about the national contest may be obtained from Auxiliary Headquarters.

THIRD COMMUNITY WORKSHOP

As a member of the Iowa Council for Better Education, we are aiding in the planning of the Third Iowa Community Workshop, which is to be held October 17 and 18 in the Memorial Union Building at Ames. The objectives of these workshops are:

1. To help community workers find guides for analyzing community needs.
2. To give community workers opportunities to learn about community councils and procedures to use in correlating their efforts.
3. To promote acquaintance and establish more common ground among representatives of state organizations and agencies who are serving various types of community programs.

PROGRAM MATERIAL

All program material relative to the activities of the Woman's Auxiliary may be secured from Auxiliary Headquarters, 629 Eleventh Ave., Fort Dodge. The poster "The Doctor," the Twelve Point A.M.A. Program, material on compulsory health insurance and other legislation is available and will be forwarded promptly upon request.

Mrs. C. C. Coughlan,
Corresponding Secretary

A REMINDER

Dues of \$2.00 per month per member will be payable to the State Treasurer Jan. 1, 1950.

CONTRASTS IN METHODS

(Editorial Reprinted from *Chicago Journal of Commerce*, June 2, 1949)

The American Medical Association has done an unusual thing!

In order to combat misrepresentation of the purposes and methods of its publicity campaign against compulsory federal health insurance, AMA has sent to every member of the Eighty-first Congress a complete, booklet-form breakdown of the association's plan of action.

Prepared by Whitaker & Baxter, the public relations firm which is directing the AMA's drive, the booklet carefully blueprints every step to be taken at the county, state and national level.

If members of Congress take the time to read the plan, AMA's professional and lay critics will be wasting their time when they charge the organized doctors with sly, unethical propaganda.

Compare this candid, open position with the statements of Acting Security Administrator J. D. Kingsley when that gentleman testified recently before a Senate committee.

Mr. Kingsley testified that Mr. Truman's compulsory health insurance program would cost \$5,600,000,000.

If the administration were half as frank as the AMA directors, it would instruct all its witnesses to tell Congress that all cost estimates are at best only informed guesses—and not too well informed at that.

No similar system anywhere ever has remained for more than a year at most within the original estimate. The cumulative costs of such schemes cannot be estimated.

Mr. Kingsley also played a variation of the President's theme that existing voluntary health insurance plans "have proved inadequate." These plans, said the acting security administrator, cover only some 32,000,000 people "with limited hospital care only." His general conclusion was that voluntary health insurance costs too much for most people and cannot pay its way on lower premiums.

That statement of the case is considerably less than frank. What Mr. Kingsley did not tell Congress, for example, was that the Blue Cross insurance plan was not established until 1934. During 15 years it has had the phenomenal growth of more than 2,000,000 members a year.

Nor is it true that private plans provide for hospital care only. We now have Blue Shield which insures its members on actual medical service provided by doctors and surgeons. Blue Shield, which has had a somewhat slower acceptance than Blue Cross (largely for the reason that hospital care is usually a much heavier burden of illness than the doctor's bill) nevertheless now has some 10,000,000 members and is growing daily.

The AMA proposes to sell the American people on the idea that voluntary health insurance is preferable in every way to a compulsory scheme administered by government through state and local officials.

The federal government, which ought to be encouraging Americans to provide for their own care from their own incomes, instead belittles private insurance plans by telling Congress that such programs are inadequate.

Actually, in this controversy, the American Medical Association seeks to preserve the traditional American way as opposed to a federal administration trying its best to destroy that way.

If the nation's press intends to give any prizes for honesty of purpose in this battle of words, let them go to the AMA.

SUMMARY OF THE A.M.A.'S TWELVE POINT PROGRAM

The American Medical Association supports:

1. The establishment of an independent national health agency with a physician in charge.
2. The establishment of a National Science Foundation.
3. Rapid extension of voluntary hospital and medical care insurance.
4. The establishment of a medical care authority in each state to administer and distribute government funds with adequate representation of interested groups.
5. Extension of hospital and diagnostic facilities under suitable control.
6. Provision for, and establishment of, complete public health coverage for the country, with federal aid where the need can be shown, with proper remuneration of public health officers and insuring them freedom from political control.
7. Increased safeguards for the public against charlatans in the field of mental hygiene and establishment of necessary mental hygiene clinics.
8. Continued and expanded public health education by the A.M.A., state and county societies.
9. Furtherance of the care of the chronically ill through support of the Commission on Chronic Illness.
10. Protection of the veteran in his right to medical care of the highest quality.
11. Continuation of the activities of the Council on Industrial Health and cooperation with the National Safety Council and other organizations in an effort to reduce accidents.
12. Encouragement of local and private support of medical education, and use of government aid only if shown absolutely essential and then under suitable controls to protect the independence of medical education.

Finally, opposition to any government controlled compulsory system of medical care, supported by payroll taxation, with inevitable deterioration of the quality of medical care.

ATTENTION, COUNTY PRESIDENTS

If you have not returned the questionnaire forwarded to you in July 1949, please do so at once. It is important that our records of county activities be complete so that our Program Chairman's report to National will show the results of planned programs.

FALL BOARD MEETING

The Fall Board Meeting of the Woman's Auxiliary to the Iowa State Medical Society was held at the Hotel Fort Des Moines, September 21, for consideration of aims and plans for the rest of the current year.

Mrs. Walter Anneberg, president of Carroll County Auxiliary, was elected temporary chairman of the Iowa Public Health Planning Executive Committee. Our representatives on this Planning Committee are Mrs. Howard W. Smith and Mrs. Allan B. Phillips.

CARE

CARE is now embarked upon a program to rebuild the war-wrecked libraries of Europe and Asia. Contributions will be used to purchase books, based upon lists compiled by a bibliography committee which will be limited to special categories. Recipients will be institutions only, not individuals, and they have been asked to supply a list of their book needs. Contributions can be sent to CARE headquarters, 20 Broad Street, New York City.

THE NATIONAL COMMITTEE FOR CHILE

The National Committee for Chile is now receiving gifts for the library of the medical school of the University of Chile at its new collection center in the Library of Congress, Washington, D. C. The newer materials in the library, including periodicals, books, and reference materials, were totally destroyed in the recent fire. Medical periodicals of the last 10 years and recent medical books are urgently needed. Contributions should be addressed to the National Committee for Chile, Room 318, Library of Congress, Washington, D. C.

BLUE CROSS REGIONAL MEETINGS

Seven district Blue Cross Hospital meetings were held in August with an attendance of 56 of the 100 member hospitals. Mr. Clarey, supervisor of the Hospital Department, lead a discussion on forms, case-reporting problems, types of contracts and interpretation of contract benefits. Anne L. Lachner, director of Public Relations, reported on the national retention program, educational and promotional material, national legislation, and presented the Group Manual on enrollment procedures and contract benefits, which is being distributed at the present time.

A set of studies on cost, admissions and utilization was presented by F. P. G. Lattner, executive director of Hospital Service, Inc., of Iowa. These included comparisons of rural (HIA), direct pay, bank depositor and common employer groups. The rural group report covered the years from Jan. 1, 1945, to June 30, 1949, inclusive. The other reports were for the year 1948 and the first half of 1949. Studies for 1948 were given by area and size of groups and relationship to Blue Cross enrollment. Reports were made by hospitals for 1946, 1947, 1948 and the first half of 1949, and a 12 diagnoses break-down for the last quarter of 1948 and the first six months of 1949 was presented showing individual hospitals, compared to an average across the area.

Each hospital received a report showing the cost per day per extra items and the individual hospital charges in relationship to the average cross the area served by Hospital Service, Inc., of Iowa. Reports on x-ray anesthetics were also discussed.

While these reports show some definite trends on some items, to all appearances they do not lend themselves to a general pattern as yet. Attention was directed to increased utilization and the control shown by the hospitals and the medical profession in various districts.

NEWS NOTES

(Continued from page 489)

Iowa in a survey designed to show what the general practitioner needs in his course of study. Dr. Shaw designed a questionnaire which he had sent to various men in general practice in Iowa, and he had already completed a large part of this survey at the time of his death.

All of this work Dr. Shaw did not only for the benefit of the medical profession but also, or possibly rather because of, the ultimate good it would prove to be for the people in general. At heart he was a true physician, his patients' welfare being his first consideration. He kept abreast of medical advances, taking advantage of all opportunities to improve his scientific training. He was never too busy to help if he was called, and that was true not only for his patients but also for his community and his profession.

His work will be carried on, but it will be difficult to find anyone with all of his qualifications. He had a keen and orderly mind, getting down to basic facts without delay; he had enthusiasm and drive and a great capacity for hard work which enabled him to accomplish much; he had a ready wit and a friendliness which made him win friends easily and hold them enduringly. He probably exemplified as well as anyone can what can be accomplished if one lives each day to the best of one's ability.

SOCIETY PROCEEDINGS

MEETINGS

Seventh Councilor District

The Seventh Councilor District meeting was held August 25 at the Community Building in Monticello. Following dinner, Dr. Nathaniel G. Alcock, State Society president, addressed the group on the A.M.A. National Education Campaign.

Third Councilor District

Doctors and their wives from the Third Councilor District met September 2 at the Sheldon Country Club. Following dinner, speakers were Dr. W. K. Hicks, of Sioux City, Dr. T. F. Thornton, of Waterloo, and Dr. E. M. Kersten, of Fort Dodge.

Black Hawk County

The regular meeting of the Black Hawk County Medical Society was held September 20 at the Hotel Russell Lamson in Waterloo. "Carcinoma of the Lip" was the subject of the speaker, Dr. Campbell F. Watts, of Cedar Rapids.

Cerro Gordo County

Dr. Gordon Kamman, of St. Paul, Minn., was the guest speaker at the regular monthly meeting of the Cerro Gordo County Medical Society, held September 13 at Hotel Hanford, Mason City. His subject was "Office Neuropsychiatry."

Linn County

Dr. Howard K. Gray, of Rochester, Minn., will speak on "Problems Associated with Operations for Gastric and Duodenal Ulcers" at the regular meeting of the Linn County Medical Society to be held November 10.

Polk County

The Polk County Medical Society met September 23 at the Hotel Savery in Des Moines. Following dinner, Mr. William Alan Richardson, editor, *Medical Economics*, spoke on "Britain's Experiment in 'Free' Medicine."

Pottawattamie County

Members of the Pottawattamie County Medical Society were the guests of the Pottawattamie County pharmacists at a meeting on August 16. The meeting dealt with the rules and regulations of the Federal Food, Drug and Cosmetic Act, as it pertains to prescriptions and the dispensing of drugs. It was mutually decided that new prescription forms will be furnished the physician to facilitate the matter of refilling by check mark. In the event of a telephone prescription to the pharmacist, a blank will be mailed for signature and desire on refilling.

Sac County

The Sac County Medical Society held its regular dinner meeting on August 18 at the Park Hotel in Sac City. Dr. J. H. Stalford, of Sac City, read a paper on "Achievement of Personality."

Scott County

The Scott County Medical Society met September 6 at the Lend-a-Hand Club in Davenport. A scientific discussion on "Differential Diagnosis of Chest Pain" was presented by Dr. William B. Bean, professor and head of the Department of Internal Medicine, at the SUI College of Medicine.

Woodbury County

The regular dinner meeting of the Woodbury County Medical Society was held September 9 in the Ballroom of the Mayfair Hotel in Sioux City. Dr. Harwell Wilson, professor and chairman of the Division of Surgery at the University of Tennessee, Memphis, spoke on the "Diagnosis and Treatment of Thromboembolic Vascular Disease."

PERSONALS

Dr. Nathaniel G. Alcock, since 1915 professor of Urology and head of the Department at SUI College of Medicine, has resigned effective October 1 to head a new Urology Department at Mercy Hospital in Iowa City. He will retain the rank of professor on limited service at the University.

Dr. Robert Allender, a native of Boone, is opening a practice in Marion this fall. A graduate of SUI College of Medicine, Dr. Allender served his internship in a Cincinnati (Ohio) hospital and has been stationed at Spokane, Wash., while serving with the armed forces, from which he was just recently discharged.

Dr. Raymond W. Carson, of Linden, has become associated with **Dr. Andrew C. Garvy** in Iowa City. Dr. Carson was graduated from the SUI College of Medicine in 1948. He interned at Hurley General Hospital, Flint, Mich., and did special work at Iowa Methodist Hospital, Des Moines.

Dr. Charles Cretzmeyer, Jr., has become associated with his father, **Dr. C. H. Cretzmeyer**, in Algona. Dr. Cretzmeyer, Jr., was graduated from SUI College of Medicine in 1946 and interned at Pennsylvania Hospital, Philadelphia. He has recently returned from Japan, having served two years with the army medical corps.

Dr. Morton R. Crew, who has practiced in Clearfield for three years, has left for St. Louis where he will take postgraduate work in pediatrics at Washington University.

Dr. Ward George Dixon, a 1948 graduate of Marquette University Medical School, Milwaukee, Wis., has opened an office in New Albin. Born in Superior, Wis., Dr. Dixon served his internship at the St. Francis Hospital, La Crosse, Wis.

Dr. Harry H. Ennis, director of the Iowa State District Service Number 1 at Decorah, has been transferred to Manchester to serve as director of District Number 8.

Dr. Oscar L. Fullerton, of Redding, was honored by a day, August 21, known as the "Dr. O. L. Fullerton Day" and celebrating his 47 years of service in that community.

Colonel Kermit H. Gates, a native of Des Moines who has served with the medical corps of the army since his graduation from the SUI College of Medicine in 1930, has been appointed post surgeon and commanding officer, Station Hospital No. 2, Fort Bragg, North Carolina.

Dr. Preston E. Gibson, of Davenport, spoke at the first meeting of the year of the P.T.A. on virus diseases and current progress being made in combatting them.

Dr. M. E. Godbey has been appointed assistant surgeon at the Santa Fe Hospital in Fort Madison. A graduate of the SUI College of Medicine, Dr. Godbey interned at the Methodist Hospital in Indianapolis, Ind., and spent one year as research assistant in the Department of Physiology at the University of Iowa.

Dr. Brune Haid, Innsbruck, Austria, has arrived in Iowa City to spend a year in special study in anesthesia at University Hospitals under a project arranged by **Dr. Stuart C. Cullen**, chairman of the Division of Anesthesiology, and the Iowa City Rotary Club's International Relations and Fellowship Committee, which will defray part of Dr. Haid's expenses.

Dr. Robert L. Joranson, of Chicago, has become associated with the Council Bluffs Clinic, specializing in internal medicine. Dr. Joranson was graduated from the University of Chicago Medical School and interned and served as a resident at Presbyterian Hospital, Chicago.

Dr. Joseph L. Kehoe, of Davenport, spoke on "Virus Infections" at a meeting of the Kiwanis Club September 15.

Dr. James B. Knipe, of Armstrong, spoke on "Specialized Medicine" September 13 at a meeting of the General Woman's Club.

Drs. Otto E. Kruse and **Walter J. Kopsa** have opened offices for the practice of medicine and surgery in Tipton. Dr. Kruse, a native of Wisconsin, was graduated from SUI College of Medicine in 1945 and interned at Milwaukee (Wis.) County Hospital. He served with the army medical corps at

Orlando, Fla., and has been a resident physician at St. Luke's Hospital, Cedar Rapids, since 1948.

Dr. Kopsa, who also has been a resident at St. Luke's Hospital in Cedar Rapids, is formerly of Cicero, Ill. He was graduated in 1945 from the University of Illinois College of Medicine and interned at Cook County Hospital, Chicago. He has served two years in the army medical corps at Fitzsimmons General Hospital, Denver, Colo.

Dr. E. L. Manning has assumed charge of the EENT department of West Davenport Clinic, where he will be associated with **Drs. J. H. Sunderbruch, R. J. Neufeld, R. P. Carney** and **Gordon Rock**. Born in Utica, N. Y., Dr. Manning was graduated in 1936 from the University of Zurich, Switzerland, and interned at Trinity Hospital, Brooklyn, N. Y. He has taken postgraduate training at the Universities of Vienna, Austria, and of Chicago, Ill., and served with the army medical corps from 1942 to 1946. He comes from the Veterans Hospital, Lebanon, Penn., where he was chief of the EENT department.

Dr. William J. Morrissey, of Des Moines, will address the Brooks School P.T.A. on October 11. His subject will be "The Importance of Health in Children."

Dr. Nelle S. Noble, who has practiced in Des Moines for 44 years, has retired from the practice of medicine. She is a past president of the American Women's Medical Association.

Dr. Cecil S. O'Brien, since 1925 professor and head of the Department of Ophthalmology of SUI College of Medicine, has resigned effective November 1 to retire to a ranch in southern Arizona, although he will engage in consultation practice part time in Tucson.

Dr. William R. Owen, of Osage, who has practiced for 45 years, has announced his retirement.

Dr. Gordon Rock, of Davenport, has become associated with **Drs. J. H. Sunderbruch, R. J. Neufeld** and **R. P. Carney** in general practice, surgery and obstetrics. Dr. Rock was graduated from Creighton University School of Medicine in 1946 and interned at St. Joseph's Memorial Hospital, Omaha, Neb. He recently completed two years' service with the army medical corps.

Dr. Edwin L. Rushia, resident physician in the Division of Anesthesiology at University Hospitals, left July 1 to head the newly established Department of Anesthesiology at the University of Arkansas. Mrs. Rushia, also a doctor, has sold her practice in Riverside and is obtaining an Arkansas license.

Dr. Philip T. Spencer, who has been practicing in Baxter since his discharge from the army two years ago, is opening a practice in Essex on October 1.

Dr. Edmund J. Tierney, of Sioux City, spoke on socialized medicine legislation at the Junior Chamber of Commerce meeting there on September 13.

Dr. Philip H. Voorhees, a specialist in urology, has been practicing in Ottumwa since August. A native of New York, Dr. Voorhees was graduated from Cornell University School of Medicine in 1943, and at Roosevelt Hospital, N. Y., served first as an intern, then as assistant resident in general surgery and later as a resident in urology. Following service with the navy medical corps, Dr. Voorhees practiced in Los Angeles, taught anatomy at Cornell University and then became a resident urologist on the Yale University Service of the Veterans Hospital at Hartford, Conn.

Dr. John M. Wall has opened offices in Boone. A native of St. Joseph, Mo., Dr. Wall was graduated from the University of Tennessee College of Medicine. He served his internship at St. Joseph (Mo.) Hospital and Kansas City (Mo.) General Hospital.

Dr. Max E. Witte, superintendent of the State Hospital at Independence, discussed mental health at a meeting September 13 in Grundy City, sponsored by the Grundy County Women's Committee and the Health Improvement Association.

Dr. William L. Yetter, of Iowa City, has opened offices there for the private practice of general surgery. A native of Iowa City, Dr. Yetter was graduated from the SUI College of Medicine in 1939 and served an internship at Roper Hospital in Charleston, S. C. Before and after five years of service in the army medical corps, Dr. Yetter was a resident in surgery at University Hospitals for five years, including the last year as an instructor.

Dr. James V. Yackley has closed his practice in Denison and joined the Midwest Clinic at Rapid City, S. D.

MARRIAGE ANNOUNCEMENTS

Griffiths-Brown

Helen Patterson Griffiths and Dr. Ivan Eugene Brown were married August 7 in their own new home in Spencer. The bride had been employed as a cosmetician at the Bjornstad Drug Company for the last two years.

Schrunk-McMillen

Miss Leone Schrunk and Dr. Arch S. McMillen, both of Fort Dodge, were married on September 3 in the chapel of the First Presbyterian Church in Lincoln, Neb. The bride has been manager of the Wahkonsa Hotel for the past several years.

van der Veer-Allen

Miss Carla van der Veer, daughter of Mr. and Mrs. John R. van der Veer, of Fort Dodge, and Dr. Marion B. Allen, the son of J. C. Allen of Cove, Ark., were married September 5 at St. Mark's Episcopal Church in Fort Dodge.

DEATH NOTICES

Anderson, Edward W., 50, physician in Des Moines for 19 years, died of a cerebral hemorrhage at Iowa Methodist Hospital September 4 after an illness of three years. Born at Marion, Dr. Anderson was a graduate of the SUI College of Medicine and for five years was on the staff at Mayo Clinic, Rochester, Minn. He was a life member of the Polk County and Iowa State Medical Societies.

Buzard, Irenarch Sylvester, 76, died at his home in Jefferson on September 7 after a month's illness. He was graduated in 1898 from the College of Physicians and Surgeons at Keokuk. He had postgraduate training in his eye, ear, nose and throat specialty in Chicago, London and Vienna. He had practiced in Russell, Chariton, Waterloo and Carroll before coming to Jefferson in 1928. He was a life members of the Greene County and Iowa State Medical Societies.

Clark, Howard F., 67, Stuart physician, died in the Lutheran Hospital in Des Moines September 8, having suffered poor health for seven years. Born in Pennsylvania, Dr. Clark was graduated from the University of Pittsburgh in 1905 and was associated with his brother, Dr. H. E. Clark, in Pittsburgh before come to Stuart in 1908. He was a member of the Dallas-Guthrie and Iowa State Medical Societies.

Matthews, Robert John, 74, Clarinda eye, ear, nose and throat specialist, died at his home August 18 following a stroke. Born near Ottawa, Canada, Dr. Matthews was graduated from the Medical Faculty of Trinity University, Toronto, in 1898. A veteran of World War I, Dr. Matthews had recently retired. He was a member of the Page County and Iowa State Medical Societies.

Mehler, Frank, 44, of New London, died August 23 in Burlington Hospital after suffering a stroke a few days before. Dr. Mehler, the third generation of Mehlers to practice medicine in New London, was graduated from the SUI College of Medicine in 1930 and interned in Rochester, N. Y. He was a member of the Henry County and Iowa State Medical Societies.

Riggle, Frank P., 71, Cedar Rapids physician for more than 30 years, died August 25 in a Cedar Rapids hospital after a week's illness. Dr. Riggle was graduated from the College of Physicians and Surgeons, Keokuk, in 1900 and served as a major in World War I. He was a member of the Linn County and Iowa State Medical Societies.

Shaw, Ernest E., 57, physician in Indianola for 27 years, died at his home August 27 following a heart attack. Born at Mitchellville, Dr. Shaw was graduated from the SUI College of Medicine in 1920, practicing two years at Menlo before moving to Indianola. He was a member of the Warren County and Iowa State Medical Societies.

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THE MANAGEMENT OF CONVULSIVE DISORDERS

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Minneapolis, Minn.

The term *convulsive disorder*, a synonym for *epilepsy*, is considered preferable for two reasons: first, the connotation of the term is more favorable to the average person, since epilepsy is looked upon by many as a horrible or incurable disease; secondly, there is danger of the acceptance of epilepsy as a diagnosis of a disease entity in itself rather than consideration of it as a symptom of underlying pathology.

A convulsive disorder results whenever there is an excessive neuronal discharge within some area of gray matter in the central nervous system. It is, therefore, a symptom of the disease process which produces this discharge.

It is a common disability. Some 650,000 persons in the United States, roughly 1 in 200, have a convulsive disorder.

Classification

There are various ways of classifying seizures. The ultimate in simplicity would be the etiologic classification formerly used, viz. symptomatic or essential epilepsy, indicating that there is or is not a demonstrable cerebral lesion respectively. Another classification based on the clinical appearance of the seizure is the well known grand mal and petit mal epilepsy, which classification indicates that there is or is not a convulsion accompanying the episode. Neither of these classifications is particularly useful in localization of the site of origin of the seizure. Since a convulsive disorder is due to an excessive neuronal discharge of some area of gray matter, the pattern of the seizure often gives a clue to the localization, because it will reflect the function of the over-reacting area. A clinical-anatomic classification, such as that brought out by Penfield, seems most useful for the purpose of studying the patient with a convulsive disorder. It can be outlined as follows:

CLINICAL MANIFESTATION	LOCALIZATION
A. Somatic Motor Seizures	
1. Generalized seizure	Complete motor cortex
2. Jacksonian seizure	Precentral and postcentral gyrus
3. Masticatory seizure	Postcentral gyrus
4. Simple adverse seizure	Frontal lobe
5. Tonic postural seizure (opisthotonic)	Brain stem
B. Somatic Sensory Seizures	
1. Somatosensory seizure	Precentral and postcentral gyrus
2. Visual seizure	Occipital lobe
3. Auditory seizure	Temporal lobe
4. Vertiginous seizure	Temporal lobe
5. Olfactory seizure	Uncinate gyrus of temporal lobe
C. Visceral Seizures	
1. Autonomic seizure	Diencephalon
D. Psychic Seizures	
1. Dreamy state	Temporal lobe
2. Forced thinking	Frontal lobe
3. Stereotyped behaviour	Frontal lobe
4. Petit mal	Not localized
5. Automatism	Not localized
6. Poststatus epilepticus—psychotic states	Not localized

A. Somatic Motor Seizures

1. The *generalized seizure* or convulsion may be the end state of any of the other types. It is characterized by loss of consciousness associated with tonic stiffening and/or clonic jerks of the whole body, to which there may be added evidences of autonomic discharge such as micturition.

2. A *Jacksonian seizure* consists of local movements of some part of the body; in a Jacksonian "march" there is spread of the movement from one part of the body to another.

3. *Masticatory seizures* are attacks of smacking, salivation, chewing and swallowing, usually not remembered by the patient.

4. *Simple adverse seizure* involves a coordinated movement in which there is turning of the head, usually with conjugate deviation of the eyes to the side to which the patient is turning. The movement continues until it produces a half-turn, or even several turns of the body, before other phenomena supervene. It usually is associated with unconsciousness, but need not be.

5. *Tonic postural seizure* results in rigidity of the trunk with extension of all extremities.

B. Somatic Sensory Seizures

1. *Somatosensory seizures* are transient or prolonged sensations of tingling numbness, of sense of movement, of desire to move, or very occasionally of pain. A detailed "march" may occur from one somatic part to the next one and may spread

so as to produce motor movement in the same member.

2. *Visual seizures* consist of lights, sometimes colored, or dimming of vision or blindness.

3. *Auditory seizures* are characterized by simple sounds, e.g. buzzing or drumming, which are referred by the patient to the opposite ear.

4. *Vertiginous seizures* are frequently reported by the patient as dizziness or unsteadiness.

5. *Olfactory seizures* are also known as *uncinate fits* because of their localization to uncinate gyrus. Their chief feature is a disagreeable odor.

C. Visceral Seizures

These seizures may be viscerosensory or visceromotor, or a combination of the two. The sensory phenomena may be an epigastric aura, a sense of nausea or a sense of oppression or fear. Under visceromotor phenomena may be listed pupillary, vascular, gastrointestinal and pilomotor reactions.

D. Psychic Seizures

1. *Dreamy state seizures* include illusional or hallucinatory seizures. The illusional seizure is a rather sudden alteration of the patient's perceptions, resulting in a sudden feeling of familiarity with the present situation or of strangeness or of being far away. Sometimes only one sense may be involved, with sounds being louder or objects being altered in size. The hallucinatory seizure is more complicated, resembling the dreams that occur in normal sleep, and the patient is not aware of his surroundings or only partially so.

2. *Forced thinking* is an episode during which the same thought or idea repeats itself in an uncontrolled fashion, with the patient being out of contact with the environment. On recovery he is frequently able to recall the idea.

3. *Stereotyped behaviour* consists of a prolongation of the activity in which the patient was engaged at the onset of seizure. The patient is unconscious during the episode and cannot recall his actions.

4. *Petit mal* is a term which should be reserved to describe short interruptions of the stream of consciousness. The patient learns of them from evidence of lapse of time. Observers note a vacant expression and perhaps a suspension of productive activity. The term is erroneously used when it is applied to any seizure of short duration.

5. *Automatism* is the state in which an individual does not have conscious control of activity. If it occurs after a seizure, it is called *postictus automatism*. It is felt that there is involvement of the highest levels of integration of the nervous system, allowing the individual to act irrespon-

sibly although in a physically well coordinated manner.

6. *Psychotic states* are actually postictus phenomena, usually resulting from severe or repeated seizures over a long period of time. These patients are frequently violent and often extremely dangerous during the episode.

Etiology

Far too many cases are casually placed in the group labeled *idiopathic epilepsy* or, in the preferred terminology, *convulsive disorder due to cause unknown*. This group, undoubtedly, is large because the seizures often do not appear until many years after the central nervous system damage. A careful history, especially in reference to early trauma and infectious diseases, often brings to light a forgotten source of brain damage. The age of onset may give a hint toward the etiology of a convulsive disorder. Shown below is Penfield's excellent classification based on age of onset, with the listing of presumptive causes being given in the order of frequency of occurrence:

AGE OF ONSET— YEAR	PRESUMPTIVE CAUSE
Infancy 0-2.....	Birth injury, Degeneration, Congenital
Childhood 2-10.....	Birth injury, Febrile Thrombosis, Trauma, Idiopathic
Adolescence 10-20....	Idiopathic, Trauma
Youth 20-35.....	Trauma, Neoplasm
Middle Age 35-55....	Neoplasm, Trauma, Arteriosclerosis
Senescence 55-70....	Arteriosclerosis, Neoplasm

Diagnostic Studies

A systematic work-up is the best means of arriving at a satisfactory diagnosis. A careful history is useful from the viewpoint of achieving an etiologic as well as an anatomic diagnosis. Observation of the seizure pattern by a reliable witness is obviously of great importance. Other procedures include the electroencephalogram, skull x-ray, spinal puncture, pneumoencephalogram and fasting blood sugar, or preferably a six hour glucose tolerance test. The electroencephalogram is the most useful test. It reliably shows the presence of a convulsive disorder in a high percentage of cases with seizures and in a fair number of instances aids in the localization. It is useful in differentiating hysterical seizures from actual ones. The skull x-ray may show changes secondary to increased intracranial pressure, congenital abnormalities, abnormal calcifications or shift of a calcified pineal gland. The spinal puncture may show evidence of degenerative disease, lues, neoplasm, etc. The pneumoencephalogram is used when neoplasm, cysts and similar lesions are suspected and other diagnostic procedures have failed. Where a neoplasm is expected, and there are signs of increased intracranial pressure, a ventriculogram rather than a pneumoencephalogram would be

performed. The blood sugar studies are considered routine, because in a practical number of instances hypoglycemia has been found to be the underlying factor in a seizure.

Treatment

In too many instances drug therapy is considered the sole requisite for treatment. Since a convulsive disorder is the expression of neuronal overactivity in a given area of the gray matter, and clinical experience indicates such excess activity may be precipitated by various external and internal factors, a satisfactory treatment regime strives not only at drug suppression of the seizures but also at the elimination of the factors known to increase their frequency. Such factors are anxiety, tension, frustration, excessive fatigue, irregular or inadequate meals, insufficient sleep, excessive hydration and exposure to toxins such as alcohol and carbon monoxide. A suggested outline of treatment is:

1. *Psychotherapy*: In a narrow sense the therapist engages in psychotherapy on an individual basis, depending upon the symptoms requiring alleviation, by certain simple and generally applicable technics, such as reassurance, explanation, ventilation, etc. In a broader sense it means education of the patient and his family.

There exists an organization called the American Epilepsy League, which was founded in 1939. This organization, which has many local chapters, acts in an advisory and educational capacity. It is an organization of laymen designed to improve the lot of the patient both by his education and by that of the general public. The patient should be referred to the local chapter of this organization, so that he may benefit by the educational program.

Another psychotherapeutic measure of general nature is the occupation of the patient either in gainful employment or school work. Most of the employed patients have their jobs because the existence of their illness is not known by the employers. Insurance companies do not care to assume the alleged excess risk presented by a patient with convulsive disorder. No legal provision exists in most states whereby a patient with convulsive disorder may sign a waiver releasing the insurance carrier of liability in the case of injuries due to his disability. Patients with convulsive disorders actually require but few work restrictions. The outstanding of these are the driving of automobiles or similar vehicles and the operation of certain types of machinery.

2. *Diet*: The patient should have his meals at a regular time, and they should consist of a well balanced diet.

3. *Avoidance of Excessive Fatigue*: This

should be accomplished through regular and adequate rest or sleep and the avoidance of work beyond the individual's physical or intellectual capability.

4. *Avoidance of Toxicants*: The chief offender in this group is alcohol. Abstinence from alcoholic beverages is required.

Industrial poisons, e.g. carbon monoxide in garage work, may also act as a cerebral toxin. The patient should not engage in occupations where these are a hazard. The imposition of toxins on neurons which are already functioning improperly is not considered wise.

5. *Dehydration*: Our procedure is to limit fluids to approximately 1,000 cc. per day. The rationale behind this procedure is based on the concept that an excessively hydrated brain has a lowered threshold for seizures.

6. *Surgical Treatment*: Surgical approach in the case of neoplasms and other operable conditions is obvious. In recent years at least two centers have engaged in extirpation of cortical areas considered to be the foci of seizures. This work is done on such a small scale that it is not generally applicable to the management of convulsive disorders. It has been mentioned for the sake of completeness.

7. *Drug Therapy*: There are several general principles in drug therapy which should be mentioned here. There is no standard dose of a drug. The actual dosage used is that amount which is necessary to produce the best control without, or with a minimum of, undesirable toxic symptoms. Changes in dosage may be required in times of stress, e.g. at the time of menses in some women patients, during febrile illnesses and at times of emotional upsets. The intervals of administration may also have to be varied. For patients with nocturnal seizures the schedule of taking medication or increase in dosage will be shifted to the latter part of the day. To prevent precipitation of seizures, especially if the patient is on phenobarbital, in any changes in medication there should be a gradual decreasing of dosage of the old drug and increasing of the new. Therapy need not be limited to one drug—combinations are often useful. Most satisfactory combinations are made up of a barbiturate (phenobarbital, mebaral) and a hydantoin (dilantin, mesantoin). A combination accomplishes the twofold purpose of getting a sort of synergistic anticonvulsive action of the drugs plus reducing in many instances the total dose of each, thereby reducing the likelihood of side effects. Drugs now available on the market which have proven useful in the management of convulsive disorders are as follows:

a. *Bromides* were some of the first drugs used in the control of convulsive disorders, having been introduced by Sir Charles Locock in 1853. Although bromides have been replaced by newer medications (chiefly barbiturates and hydantoins), they are still useful in many individuals. Many obstinate cases may be brought under control with a proper combination of bromides and barbiturates. The common toxic effects of bromides are skin reactions and drowsiness. Long-continued use may result in the development of a toxic psychosis.

b. *Phenobarbital* was introduced by Hauptmann in 1912 and soon became, and continued to be, the treatment of choice until recently. The side effect of drowsiness is by far the most common and disturbing reaction.

c. *Mebaryl*, a Winthrop-Stearns' preparation of mephobarbital, is supplied in $\frac{1}{2}$ grain, $1\frac{1}{2}$ grain and 3 grain tablets. In our experience, this drug produces a minimum of undesirable reactions, even in large doses. The side reactions, when they occur, are similar to those of phenobarbital.

d. *Dilantin* (diphenylhydantoin sodium) was introduced by Putnam and Merritt in 1937. Dilantin is supplied by Parke Davis and Company in $\frac{1}{2}$ grain and $1\frac{1}{2}$ grain capsules. The side effects are tremor, dizziness, restlessness, ataxia, skin reactions, gastrointestinal symptoms and hypertrophy of the gums. Many patients can take dilantin for many years without untoward symptoms and then rather rapidly develop a severe ataxia which subsides when dilantin is withdrawn.

e. *Mesantoin* (3-Methyl-5-phenyl-5-ethyl-hydantoin) was first reported by Loscalzo and Kozol in 1945 and 1946. Mesantoin is a Sandoz Chemical Works' product supplied in $1\frac{1}{2}$ grain tablets. Its side reactions resemble those of dilantin and consist of tremor, dizziness, drowsiness, ataxia, skin reactions, gastrointestinal symptoms, blood dyscrasias and a curious manifestation which resembles a febrile illness with adenopathy. In cases where drowsiness is the predominant symptom it can frequently be relieved by the administration of dexadrine sulfate.

f. *Tridione* (3, 5-trimethyloxazolidine-2, 4-dione) was introduced by Lennox in 1945. An Abbott product, it is supplied in $4\frac{1}{2}$ grain capsules. Its most characteristic toxic symptoms consist of photophobia, skin reactions and gastrointestinal symptoms. A rare and disturbing toxic effect is the development of an aplastic anemia. For this reason, repeated blood studies at least every two weeks are indicated in any patient placed on this drug. It must also be kept in mind that, occasionally, tridione will precipitate generalized seizures. For this reason one of the drugs con-

trolling major seizures must always be given with the tridione.

In our experience the combination of mebaral and dilantin has proven most efficacious.

Conclusions

1. Epilepsy is not a disease entity but merely represents an excessive neuronal discharge within some area of the gray matter in the central nervous system.

2. The clinical manifestations of a convulsive disorder are quite variable and will depend upon the functional area of the brain involved.

3. The etiology of the convulsions will vary with the age of the patient. The group of so-called idiopathic epilepsy is a large one only because the source and cause of the brain damage is inadequately investigated.

4. Drug therapy is not the sole requisite for treatment of the convulsive disorders and, if used alone, will not produce the optimum results. A satisfactory treatment regime must strive to eliminate all factors that increase brain irritability such as anxiety, tension, excessive fatigue, irregular or inadequate meals, insufficient sleep, excessive hydration and exposure to toxins such as alcohol and carbon monoxide.

EXPERIENCES IN THE CLINICAL USE OF GLOBIN ZINC INSULIN IN THE TREATMENT OF DIABETES MELLITUS

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This paper is to report our experiences in the use of globin zinc insulin in the treatment of diabetes mellitus. Our work is antedated by that of many other investigators,¹⁻²¹ and we gratefully acknowledge their work in this field and the reports of their experiences.

Our study is based on 126 cases treated at the Iowa Lutheran and Broadlawns Hospitals, Des Moines, Iowa. Report of these cases includes their stay in the hospital only. The reason for this is obvious. In the hospital we know that these patients are on the proper diet and that the urine tests, blood sugar determinations and insulin dosages are correctly carried out, or in other words we know that the treatment is carried out under strictly controlled conditions. In the home we don't really know what is going on in the way of control. Many patients faithfully carry out the regimen of treatment given them when discharged from the hospital, while others do not. It is as impossible to draw valid inferences from work carried out in the home as it is

to assume that the diagnosis of a disease is necessarily the correct one, merely because the patient responds to treatment. Medical literature is full of such fallacy. Thus we do not include the home care of these patients in our study. We do see the patients, however, at regular intervals, and, from our observations at these visits, most of them appear to be under adequate control.

The first step taken in this study was to confirm that these 126 cases really had diabetes mellitus. This was done by first taking a fasting blood sugar; if this was sufficiently high, together with the presence of the clinical symptoms, glycosuria and ketonuria, the diagnosis of diabetes mellitus was made. In cases where the fasting blood sugar was dubious the classical four hour glucose tolerance test was made, and the diagnosis thereby confirmed. There can therefore be no doubt that all 126 patients reported actually had diabetes mellitus.

The type of diet used was standardized for the patient's height, age, sex and occupation. In the early group 28.5 calories per kilogram of body weight were given, while in the latter group 30 calories. In the early diets 2.5 gm. of carbohydrate, 1.25 gm. of protein and 1.5 gm. of fat for every kilogram of ideal body weight were allowed and in the latter group 3 gm. of carbohydrate, 1.25 gm. of protein and 1.5 gm. of fat. The dietary menu and all dietary factors such as minerals, vitamins and other constituents were made to approach the normal as nearly as possible. The carbohydrate was divided as follows: one fifth of the total quantity for breakfast, two fifths for dinner and two fifths for supper. Protein and fat were divided equally between the three meals. In addition to the above diet 4 ounces of orange juice and one soda cracker were given at 3 p. m. to prevent the hypoglycemic tendency that occurs in midafternoon when globin zinc insulin is used.

We insist that our patients either be sugar free or show only a slight trace throughout the 24 hour period. This demonstrates that the diet given is being utilized. The fasting blood sugar should not be in excess of 200 mg. on capillary blood determination. Our urine reports are for the total quantity for the 24 hour period divided as follows: all of the urine from after breakfast up to dinner, after dinner to supper, after supper to 10 p. m., and from 10 p. m. up to breakfast. Each of these fractions is tested qualitatively and quantitatively.

The method of urinalysis at Iowa Lutheran Hospital was by clintest and, if the urine tested negative, it was so reported. In the event sugar was present, the Benedict's quantitative determi-

nation was done. At Broadlawns Hospital the tests were made with Benedict's qualitative solution and, if sugar were found, the quantitative test was made by Benedict's quantitative method.

Since globin insulin is an approximately 18 hour acting insulin,^{4, 8, 9, 17, 19} we felt that the fasting blood sugar would undoubtedly be the highest under these conditions. Blood sugars were also taken at 11 a. m. and 4 p. m., but only the fasting blood sugars are reported, because these are the ones that are the highest when patients are receiving globin zinc insulin.

Under our method of control of these patients, we first put them on a desugarizing diet, our control diet. This is a low caloric diet consisting of carbohydrate 150 gm., protein 50 gm. and fat 50 gm., divided as previously stated (protein and fat in three equal parts and one fifth of the total carbohydrate for breakfast, two fifths for dinner, and two fifths for supper). The patient is given either regular insulin or solution of zinc insulin crystals; these are used interchangeably on our service. The patient is not kept on this low caloric or control diet for more than three days. If, on this diet, the patient is rendered sugar free for the 24 hour period, he is then placed on the maintenance diet, as previously described. If the patient is not sugar free, regular insulin or a solution of zinc insulin crystals is used and increased until the urine is sugar free and the blood sugars are within satisfactory limits.

If the patient on the maintenance diet requires four doses of insulin—namely, one before each meal and at midnight to control the nocturnal hyperglycemia—we do not put this patient on globin zinc insulin, because we consider it to be an 18 hour acting insulin, and patients needing a midnight dose of insulin require insulin activity for a 24 hour period. If, in the usage of regular or crystalline zinc insulin in bringing the patient under control, no midnight dose of insulin is required, and the total daily amount of insulin does not exceed 50 units, or in exceptional cases 60 units, we select this patient for treatment with globin zinc insulin. The reason for setting the limit on the amount of insulin injected is that large doses of slowly acting insulin are dangerous and may lead to serious, or severe, uncontrollable hypoglycemia. This is especially true in the event the patient becomes ill, developing diarrhea or vomiting. We have used globin insulin safely in the presence of serious heart disease. We do not recommend the use of globin zinc insulin in the course of acute infections or diabetic acidosis and coma.

The question may arise as to why the total dosage of globin zinc insulin used is equal in

Clinical Observations in Use of Globin Zinc Insulin in One Hundred and Twenty-six Cases of Diabetes Mellitus

Case and No.	Sex	Age	Diet No.*	Globin Zinc Insulin	Urine Sugar @ Dsc.	Fasting Blood Sugar @ Dsc.	Reaction in Hospital	Days in Hospital	Complications
1.—L. W.....	M	45	80 (0)	50	*F. Tr. 0	135	Mild	10	None
2.—M. H.....	F	69	60 (0)	55	0	212	None	11	Diabetic gangrene of left foot
3.—I. G.....	F	72	65 (0)	40	F. Tr. 0	176	None	23	Vaginal hysterectomy for prolapse
4.—H. W.....	M	73	70	45	0	142	None	11	None
5.—M. O.....	F	61	60	60	F. Tr. 0	104	None	12	Congestive heart failure
6.—C. R.....	F	54	60	40	F. Tr. 0	165	None	16	Acute appendicitis
7.—G. H.....	M	61	80	45	0	122	Mild	13	None
8.—I. S.....	F	71	65	35	0	226	None	5	None; patient left hospital before treatment completed
9.—F. T.....		55	70	25	1% 0	226	None	23	Upper respiratory infection
10.—B. B.....	M	71	55	45	1% 0	162	None	11	Chronic right hemiplegia
11.—R. P.....	M	70	70	30	0	162	None	9	Secondary anemia
12.—F. W.....	M	57	80	15	*Tr. 0	204	None	13	Diabetic retinitis; Gangrene of left foot
13.—E. P.....	F	59	65	35	0	204	None	8	None
14.—C. R.....	M	62	75 (0)	37	0	186	None	5	None
15.—E. P.....	M	62	75 (0)	55	0	102	None	8	None
16.—E. D.....	M	60	75 (0)	45	Tr. 0	162	Mild	18	Intestinal obstruction; Diabetic acidosis
17.—E. H.....	M	41	C250 P100 P150	15	0	157	None	5	None
18.—F. B.....	M	60	65	35	0	133	None	9	None
19.—W. P.....	M	54	75	70	0	198	Mild	7	Alveolar pyorrhea
20.—V. G.....	M	36	65	50	Tr. 0	204	None	9	Cerebral arteriosclerosis
21.—D. H.....	M	36	65	50	2% 0	170	None	10	Obesity (over 300 lb.)
22.—L. H.....	M	32	65	45	0	241	Severe	10	Control not good but better than with regular insulin
23.—E. C.....	F	53	60	50	2% 0	204	None	10	Parkinson's disease
24.—G. C.....	M	70	70	35	0	104	None	8	None
25.—A. G.....	F	57	65	15	0	200	None	8	Arteriosclerotic heart disease
26.—M. R.....	F	54	60	60	Tr. 0	247	None	11	Myxedema; Arterial hypertension
27.—G. S.....	F	47	55	40	0	116	None	12	None
28.—L. R.....	M	52	70	30	F. Tr. 0	147	None	8	Arteriosclerosis of both legs; Gangrene of right hip
29.—J. L. S.....	F	75	65	40	0	226	None	5	None
30.—L. C.....	M	81	65	10	0	204	None	9	Carcinoma of prostate
31.—E. W.....	F	52	60	30	0	189	None	15	None
32.—S. K.....	M	75	65 Old	40	0	145	None	8	None
33.—M. L. P.....	M	29	80 Old	CZI-10 GZI-55	0 Tr.	266 98	Severe	12	None
34.—B. W.....	F	57	65 Old	50	0	133 155	None	6	None
35.—G. G.....	M	75	80 Old	30	0	204	None	5	Diabetic neuroretinitis
36.—O. P.....	F	55	60 Old	35	0	170	None	11	None
37.—J. T.....	M	55	70	45	0	173	Mild	7	None
38.—I. E. G.....	F	66	60	30	Tr. 0	196	None	11	Essential hypertension
39.—S. A.....	F	60	65	40	0	200	None	9	None
40.—D. M.....	F	41	65 Old	40	0	152	None	8	Pyorrhea
41.—V. M.....	F	53	65 Old	25	0	200	None	10	Bilateral cataracts
42.—D. M. K.....	F	58	65 Old	10	Tr. 0	112	None	5	None
43.—E. O. K.....	M	76	55	10	0	200	None	36	Acute cholecystitis stone; Pancreatitis (surgery)
44.—A. P. U.....	F	70	60	35	0	112	None	11	Arterial hypertension
45.—W. H.....	M	49	90	45	Tr. 0	90	None	9	None
46.—W. M.....	M	71	80	25	0	75	None	9	None
47.—E. B.....	F	63	65	50	0	152	None	13	None
48.—A. C.....	F	57	75	35	Tr. 0	87	Mild	12	None
49.—A. G.....	F	68	60	45	0	226	None	10	Essential hypertension
50.—G. F.....	F	53	70	40	F. Tr. 0	189	Moderate	7	None
51.—E. D.....	M	52	80	45	0	95	None	10	None
52.—A. A. M.....	M	72	80	25	0	176	None	6	None
53.—J. L. S.....	F	75	65	40	Tr. 0	226	None	5	None
54.—M. M.....	F	56	60	15	0	197	None	9	Arteriosclerotic heart disease
55.—N. M.....	F	69	60	15	1/2% 0	199	None	8	None
56.—S. P.....	F	66	65	15	Tr. 0	170	None	16	Arteriosclerotic heart disease
57.—H. M.....	M	74	60	25	0	18	None	24	Diabetic encephalopathy; Right pneumonitis with atelectasis
58.—J. R.....	M	88	65	25	0	153	None	10	Prostate hypertrophy

Clinical Observations in Use of Globin Zinc Insulin in One Hundred and Twenty-six Cases of Diabetes Mellitus—Continued

Case and No.	Sex	Age	Diet No.*	Globin Zinc Insulin	Urine Sugar @ Dsc.	Fasting Blood Sugar @ Dsc.	Reaction in Hospital	Days in Hospital	Complications
59.—H. J.....	F	55	65	35	0	166	None	17	Lues
60.—M. B.....	F	70	65	40	0	180	None	13	None
61.—M. G.....	F	33	65	75	Tr. 0	137	None	8	Latent lues; Pregnancy
62.—S. E.....	F	77	65	40	Tr. 0	170	None	10	None
63.—A. C.....	F	60	60	35	Tr. 0	211	None	25	Hypertensive cardiovascular disease
64.—S. W.....	F	70	60	15	0	166	None	17	Senile cataract
65.—V. W.....	F	26	60	30	0	193	None	15	Pyelitis; Cystitis; Monilia infection of vagina
66.—L. M.....	F	65	65	30	0	175	None	18	Iridocyclitis of left eye
67.—E. W.....	M	60	70	30	Tr. 0	190	None	9	Diabetic neuritis; Hypertrophic arthritis
68.—C. H.....	F	67	65	30	0	137	None	11	Arteriosclerotic heart disease with decompensation; Diabetic retinitis
69.—I. B.....	F	55	65	25	0	108	None	10	Gastric ulcer
70.—E. B.....	F	70	60	35	0	128	None	9	None
71.—R. T.....	F	67	65	50	0	214	None	11	Hypertensive cardiovascular disease; Bilateral cataracts
72.—E. T.....	F	76	60	30	0	291	None	8	Hypertensive cardiovascular disease
73.—L. V.....	F	54	65	55	0	214	None	16	Obesity
74.—P. W.....	F	49	65	15	0	132	None	22	None
75.—A. W.....	F	67	60	15	0	202	None	17	Lobar pneumonia
76.—K. Z.....	F	64	55	25	0	220	None	12	None
77.—C. C.....	F	72	60	55	0	202	None	10	Hypertensive cardiovascular disease
78.—F. K.....	F	56	70	28	0	166	None	24	Diabetic neuritis; Lues
79.—H. F.....	F	51	60	30	Tr. 0	197	None	15	Upper respiratory infection
80.—A. T.....	F	70	60	35	0	175	None	12	None
81.—J. P.....	F	61	60	25	0	265	None	17	Gallstones; Fibroid uterus; Perianal fistula
82.—E. P.....	F	37	70	55	0	175	None	34	Functional uterine bleeding
83.—C. F.....	M	72	60	40	0	156	None	6	Basal cell carcinoma of nose; Cellulitis of ear
84.—H. J.....	F	89	55	15	0	197	None	23	Arthritis
85.—I. O.....	F	54	60	45	0	144	None	14	Hypertension
86.—G. H.....	M	67	70	55	0	180	None	67	Diabetic gangrene; Midthigh amputation
87.—A. H.....	F	62	70	20	0	179	None	25	Obesity
88.—C. B.....	F	66	55	55	0	141	None	21	Hemorrhoids
89.—R. B.....	F	71	60	40	Tr. 0	144	None	15	None
90.—I. B.....	F	64	65	80	Tr. 0	260	None	54	Arteriosclerotic gangrene; Hypertensive cardiovascular disease
91.—S. B.....	F	76	65	30	0	174	None	8	Hypertensive cardiovascular disease
92.—G. B.....	F	32	65	10	0	193	None	31	Lues
93.—R. A.....	F	63	65	20	1% 0	240	None	12	Duodenal ulcer
94.—E. A.....	M	59	75	30	0	105	None	43	Amputation of great right toe; Diabetic gangrene
95.—M. C.....	F	65	60	35	Tr. 0	157	None	11	Bronchopneumonia
96.—F. S.....	F	70	60	30	0	197	Mod.	14	Upper respiratory infection
97.—C. R.....	M	73	60	15	Tr. 0	132	None	10	Peripheral vascular disease
98.—M. P.....	M	75	65	15	0	191	None	40	Arteriosclerotic heart disease
99.—G. C.....	F	72	70	30	0	195	None	9	None
100.—S. C.....	M	63	70	35	0	111	None	11	Diabetic retinitis
101.—A. D.....	F	76	65	60	0	193	None	10	Acute bronchitis; Hypertension
102.—L. D.....	F	68	65	15	0	185	None	7	Arteriosclerotic heart disease
103.—R. D.....	F	66	65	15	0	None	None	10	General arteriosclerosis
104.—J. D.....	F	76	55	20	0	229	None	17	Arteriosclerotic heart disease; Hypertension
105.—R. D.....	F	58	65	55	0	228	None	10	General arteriosclerosis
106.—M. C.....	F	73	65	15	0	190	None	19	None
107.—E. C.....	F	26	55	35	0	157	None	15	Exogenous obesity
108.—A. S.....	F	70	60	20	0	144	Mild	18	None
109.—S. S.....	M	65	70	15	0	157	Severe	10	Bilateral cataract; Arteriosclerotic heart disease
110.—B. M.....	F	50	60	30	0	219	None	7	Hypertensive cardiovascular disease
111.—L. L.....	F	79	65	35	0	130	Mild	19	Arteriosclerosis with auricular fibrillation
112.—E. K.....	F	57	65	35	0	175	None	14	None
113.—G. K.....	M	74	55	55	0	72	Mod. Severe	7	General arteriosclerosis
114.—J. E.....	M	80	55	15	0	170	Mod. Severe	11	General arteriosclerosis; Parkinson's disease
115.—C. G.....	M	41	80	36	0	137	None	21	Diabetic ulcer of left foot
116.—A. G.....	F	74	65	15	0	203	None	9	None
117.—T. G.....	M	58	75	40	Tr. 0	184	Mild	8	Entered in insulin shock
118.—C. F.....	M	76	60	30	0	190	None	19	Cellulitis of face
119.—J. E.....	M	85	75	40	0	140	None	21	None
120.—N. V.....	F	59	60	40	0	172	None	10	None
121.—C. C.....	F	72	60	45	0	138	None	21	Diabetic gangrene of foot
122.—H. B.....	M	49	75	50	0	145	Mild	10	None
123.—R. G.....	M	58	70	40	Tr. 0	170	None	7	None
124.—F. C.....	M	55	70	15	0	114	Mild	5	Hypertensive cardiovascular disease
125.—E. B.....	F	57	65	35	0	231	None	19	Pelvic repair
126.—T. P.....	M	62	65	20	0	52	Mild	10	Acute enteritis

*Diet number is ideal weight in Kg. multiplied by either of diet figures given as follows: "O" or "Old"—carbohydrate 2.5, protein 1.25, fat 1.5 gm. per Kg. of ideal body weight; other diets—carbohydrate 3, protein 1.5, fat 1.5 gm. per Kg. of ideal body weight.

*Faint Trace

*Trace

amount to that of the total dosage of regular insulin or solution of zinc insulin crystals. We believe the amount of insulin needed to metabolize a given diet has to be the same regardless of the type of insulin used. If globin zinc insulin is used, it simply means that, instead of injecting so many units of a rapidly acting insulin three times a day, the total amount is injected at one time in an insulin that is combined with a substance that renders it not immediately available, but instead it must be broken down into usable insulin. The total amount of insulin must, therefore, be the same, and the simplest way to arrive at the proper dosage is to utilize regular insulin first to determine the total amount. Using this precise method reduces the stay of the patient in the hospital.

Allergic reactions to globin insulin are not common. Globin insulin has been used in the presence of other diseases, as we have shown under our tabulated report herewith presented. Insulin reactions were seldom serious, nor were they severe with globin zinc insulin.

Conclusions and Summary

Globin zinc insulin is, in properly selected cases and under proper management, a safe, useful and smooth acting insulin. No attempt has been made in this paper to compare it to protamine zinc insulin or to protamine zinc insulin and regular insulin mixtures. Nevertheless, we find globin zinc insulin, in our specially selected cases, more easily harnessed for adequate control of diabetes mellitus than either protamine zinc insulin or protamine zinc and regular insulin mixtures. It lacks the erratic action of the other two preparations.

No attempt is made to say that globin insulin will replace either regular, crystalline zinc or protamine zinc insulin in all cases, but only that we find it an ideal type of insulin for selected cases, as presented in this series.

We gratefully acknowledge the work done and reports made by other workers on this subject. Some of their ideas have been incorporated in the management of our cases.^{4, 8, 9, 17, 19}

We recommend U 40 strength globin zinc insulin in preference to U 80, in the usage of which patients can make serious errors.

Our blood sugar reports are based on capillary blood. Globin zinc insulin is given one hour before breakfast in one dose. In our cases we have had no instances of nocturnal hypoglycemic reactions.

Globin zinc insulin should be injected in the deep subcutaneous tissue and not in the deeper layers of the skin or intramuscularly.

BIBLIOGRAPHY

1. Reiner, L.; Searle, D. S.; and Lang, E. H.: Insulin preparations with prolonged activity; globin insulin. *Proc.Soc. Exper. Biol.&Med.*, xl:171 (February) 1939.
2. Andrews, G. B.; and Groat, W. A.: Globin insulin; clinical study. *New York State J.Med.*, xl:913-917 (June 15) 1940.
3. Bauman, L.: Further experience with globin insulin. *Am.J.M.Sc.*, cc:299-303 (September) 1940.
4. Duncan, G. G.; and Barnes, C. E.: Action of globin insulin compared with that of crystalline, unmodified, and protamine zinc insulin. *Am.J.M.Sc.*, ccii:553-563 (October) 1941.
5. Bauman, L.: Globin insulin. *Bull. New England Med. Center*, 299-303 (February) 1943.
6. Paul, J. D.: Globin insulin. *M.World*, lxi:443-446 (December) 1943.
7. Protas, M.: Comparative study of action of globin insulin with other forms of insulin. *M.Ann.District of Columbia*, xiii: 254-257 (July) 1944.
8. Martin, H. E.; Simonsen, D. G.; and Homann, N. H.: Time activity curves of globin insulin with clinical applications. *Am. J.M.Sc.*, ccviii:321-332 (September) 1944.
9. Mosenthal, H. O.: Globin insulin with zinc in treatment of diabetes mellitus. *J.A.M.A.*, cxxv:483-488 (June 17) 1944.
10. Jackson, R. L.; and McIntosh, C. B.: Treatment of diabetic child with particular reference to use of globin insulin. *Am.J. Dis.Child*, lxx:307-313 (Nov.-Dec.) 1945.
11. Sindoni, A., Jr.: Fasting blood sugar vs. postprandial blood sugar as observed in normal individuals, medical (non-diabetic) patients, and patients with diabetes. Special reference to: plain, protamine zinc and globin insulin, compatible hyperglycemia and arteriosclerosis. *Am.J.Digest.Dis.*, xiii:178-192 (June) 1946.
12. Sindoni, A., Jr.: Present day conception of protamine zinc insulin and globin insulin with zinc; special reference to insulin hypoglycemia and "insulin mixtures." *Delaware State M.J.*, xviii:21-32 (February) 1946.
13. Roberts, J. T.; and Yater, W. M.: Comparison of clinical use of protamine zinc insulin and globin insulin in equal doses. *Ann.Int.Med.*, xxvi:41-66 (January) 1947.
14. Roberts, J. T.; and Yater, W. M.: Clinical value of globin insulin. *Proc.Am. Diabetes A.*, vii:289-305, 1947.
15. Rabinowitch, I. M., and others: Globin insulin. *Canad. M.A.J.*, lvi:595-605 (June) 1947.
16. Rohr, J. H.; and Colwell, A. R.: Comparison of intermediate insulins. *Proc.Am. Diabetes A.*, viii:37-54, 1948.
17. Rohr, J. H.; and Colwell, A. R.: Comparative time action of globin insulins. *Arch.Int.Med.*, lxxxii:54-62 (July) 1948.
18. Sprague, R. G.: Use of various kinds of insulin. *M.Clin. North America*, xxx:933-944 (July) 1946.
19. Joslin, E. P.: Use of insulin in its various forms in treatment of diabetes. *Bull. New York Acad.Med.*, xviii:200-216 (March) 1942.
20. Mosenthal, H. O.: Management of diabetes mellitus: analysis of present-day methods of treatment. *Ann.Int.Med.*, xxix: 79-90 (July) 1948.
21. Barach, Joseph H.: *Diabetes and Its Treatment*. New York, Oxford Press, 1949. p. 291-293.

TRANSFUSION IN ANEMIA

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During the past 15 years blood transfusion has become widely applied in the treatment of many diseases. Critical examination discloses, however, that its usefulness is limited to the replacement of blood volume and to the correction of anemia. Its employment in other conditions is of questionable value or of transient effect. Although the replacement of blood volume in cases of shock is ordinarily attended by spectacular results, the treatment of anemia is a more important problem, for it is a part of the care of many patients and common in the practice of every physician. The place of transfusion in the treatment of erythrocyte deficiency therefore merits careful consideration.

Blood transfusion, because of perfected technic and the understanding of natural and induced incompatibilities, has become a relatively safe procedure. Yet, it is inherently dangerous and attended

by grave complications, leading to death in about one out of 1,000 instances.¹ This demands examination of the indications for transfusion in cases of anemia and the weighing of probable benefit to the patient against possible disaster. It also makes evident the fact that transfusion is to be avoided except when there is no other rational means of therapy.

Indications for Transfusion in Anemia

Anemia results from the decreased production of erythrocytes, their excessive destruction, or from acute or chronic hemorrhage.² Of the patients falling in the first group the majority will require the administration of iron or liver and nothing more. However, in certain chronic diseases there may be a depression of the bone marrow which is not responsive to medication and in which only transfusion serves to maintain an adequate content of hemoglobin in the blood. Examples of this state are encountered in cases of chronic infection, nephritis and hepatic disease. Two other types of bone marrow deficiency require transfusion. These are aplasia and myelophthisis caused by metastatic malignancy or leukemic infiltration. In some cases of anemia resulting from the excessive destruction of erythrocytes transfusion is the only method of treatment. In familial and acquired hemolytic icterus, splenectomy is the treatment of choice, and transfusion is employed as a supportive adjunct or in preparation for operation. In acute hemolytic anemia (Lederer's) and in erythroblastosis foetalis, transfusion is curative. Only varying degrees of palliation can be expected in other forms of hemolytic anemia, except in those rare instances of spontaneous isohemolysis which sometimes complicate primary atypical pneumonia in which transfusion is apparently of permanent benefit. It must be noted that in many of the hemolytic anemias a crisis may be precipitated by transfusion. The third group of anemias—those due to blood loss—is best treated by the eradication of the cause of bleeding and the subsequent administration of iron. It is evident that transfusion is rarely necessary in the treatment of anemia itself, since it is the procedure of choice only in deficiency of the bone marrow and in certain hemolytic states. However, it has great value in any type of anemia when operative procedures are contemplated, when there is superimposed infection or when the hemoglobin level is dangerously low. The indications for transfusion in anemia may be summarized as follows:

1. Aplastic anemia or myelophthisis.
2. Preparatory to operation.
3. Infection.

4. Dangerously low hemoglobin.

5. Certain hemolytic anemias.

The last category is composed of rare cases which often require application of special technics. The others encompass the majority of patients coming into the daily experience of the physician.

Transfusion in Aplastic Anemia

Transfusion is the sole method of preserving life in patients with aplastic anemia or myelophthisis. Erythrocyte levels should be maintained sufficiently high that nearly normal activity may be enjoyed by the patient. The outcome of these cases is determined by one of three factors. In myelophthisis it is governed by the progress of the underlying disease, and transfusion is of only temporary benefit. In aplastic anemia deficiency of blood elements rather than erythrocytes may develop. Troublesome bleeding often results and, not infrequently, death from massive hemorrhage. The only favorable factor in aplastic anemia is the tendency of the patient to recover spontaneously. Transfusion is simply a means of tiding him over until the hoped-for resurgence of the bone marrow occurs. There seems to be no great profit in elevating the erythrocyte count above 3,500,000 per cu. mm. nor in allowing it to fall below 2,000,000. Therefore these individuals are usually transfused when the red cell count reaches the lower of these two levels. Enough blood is administered to produce a rise in the count to 3,500,000. Theoretically, this is 1 per cent of the patient's red cell volume for each day intervening since the last transfusion, or more practically 1,000 to 1,500 ml. every three weeks.

Transfusion in Infection

When infection complicates anemia of any type, transfusion is recommended. The exact mechanism by which raising the hemoglobin level operates to aid in combating infection is unknown. It is one of the empiricisms of medicine that has become well established by practice. To obtain full benefit, transfusion should be employed in such a fashion as to quickly raise the erythrocyte count to normal levels and to maintain it there. This may require rather massive transfusion initially and repeated small transfusions at frequent intervals thereafter.

Preparatory to Operation

At times, even though the type of anemia exhibited by the patient may not in itself indicate transfusion, the procedure is necessary in preparing for operation. Bleeding lesions of the gastrointestinal tract offer a good example. In such cases operative treatment is often necessary not only for the primary lesion but to remove the cause of blood loss. Operation of the anemic

patient should not be considered, whatever the relationship of the anemia to the disease under attack, until the former has been corrected. Ordinarily, attainment of an erythrocyte count of 4,000,000 per cu. mm. is sufficient.

Dangerously Low Hemoglobin Levels

The final indication for transfusion in anemia is found in patients with markedly depleted hemoglobin levels, ordinarily taken to be that concentration of hemoglobin corresponding to a red cell count of less than 1,000,000 per cu. mm.³ Another finding which marks the need for quick augmentation of the circulating hemoglobin is dyspnea.² If there is no other reason for transfusion, and subsequent treatment may be expected to correct the underlying deficiency, it is necessary to administer only sufficient blood to relieve the anoxia. This is accomplished by the attainment of a red cell count of 2,250,000 per cu. mm.

Table 1—Goals for Transfusion in Anemia

	RBC Millions/mm. ³	Hb. Gm/100 ml.	Hb. %
Infection	5.00	15.00	100
Preparatory to operation.....	4.00	12.00	80
Aplastic anemia	3.50	10.50	70
Extreme anemia	2.25	6.75	45

The accomplishment of the goals set forth in Table 1 may require administration of rather large quantities of blood. In order that this may be done efficiently and without danger to the patient, several factors must be considered: first, the total required dosage, second, the rate of administration, and lastly, the total volume in relation to time required for administration. Any one of several formulas for the calculation of the volume of blood necessary to raise the hemoglobin concentration or the red cell count to the desired level may be used. All such computations are based on the fact that the blood volume varies with body size and the assumption that a diminished cell volume is replaced by an augmented plasma volume.⁴ When cells are added by transfusion, it is thought that the plasma volume shrinks accordingly. It is possible then to equate the condition of the patient's blood before and after transfusion and to derive several formulas^{1, 3, 5}:

1.
$$\frac{\% \text{ rise in Hb. desired} \times \text{patient's blood volume}}{100}$$
Desired rise in Hb. in gm. per 100 ml. X patient's blood volume
2.
$$\frac{15}{\text{Desired rise in RBC in millions per cu. mm.} \times \text{patient's blood volume}}$$
3.
$$\frac{5,000,000}{\text{Desired rise in RBC in millions per cu. mm.} \times \text{patient's blood volume}}$$

For the patient's blood volume one uses the body weight multiplied by 90 when measured in kilograms and by 40 when in pounds. All formulas give the volume of blood to be transfused in milliliters. The author prefers the rule-of-thumb that the administration of 500 ml. of blood will raise the red cell count of the average sized person by a half-million per cu. mm.¹ and the hemo-

globin level by the equivalent 1.5 gm. per 100 ml. It is readily seen that to raise the blood of a severely anemic individual to a level permitting surgery or to combat infection may require the administration of 2,000 to 3,000 ml.

Transfusion of such large volumes poses a problem in itself. The important considerations are the rate of flow and the total volume which can be given at one time without overloading the circulation. The two are obviously interrelated. Methods have been devised for massive transfusion, utilizing a constant slow drip requiring many hours.³ The rate of flow advised is 1 ml. per hour per pound of body weight or in cases of cardiac disease, respiratory disorder, cachexia or extreme anemia, 0.5 ml. per pound. It is further advised that, when more than 33 per cent of the hemoglobin is to be replaced, the transfusion be done in two parts separated by 48 hours. The author prefers smaller daily transfusions, which method accomplishes the same result. A liter of blood may be given daily, and desired levels reached in two or three days. In cases where total volume is of importance, concentrated cell suspensions prepared by siphoning or decanting the plasma away may be used. In this manner, the cells from a liter of blood may be given in a total volume of approximately 600 ml. The suspension is thick but can be administered satisfactorily through an ordinary transfusion apparatus.⁶ The rate of flow attained by use of gravity and a 20 gauge needle will approximate 20 ml. per minute with whole blood and somewhat less with concentrated cells. This is well within the range of safety since velocities as high as 60 ml. per minute have not proved excessive.¹ In those cases where danger of circulatory overload is present the rate of injection should be reduced to as little as 1 ml. per minute and the patient watched carefully for signs of increased venous pressure.

Special note should be made of the fact that the circulation of the severely anemic patient is easily overloaded. This arises from the peculiar hemodynamics that obtain when the hemoglobin falls below 20 per cent. The blood volume in these individuals is sharply reduced to levels as low as 2 L.⁷ The circulation is rapid, and there is arteriolar dilation, increased cardiac output, increased right auricular pressure and increased percentage of oxygen utilization. Further rise in right auricular pressure incident to transfusion may be followed by a fall in cardiac output with the appearance of pulmonary edema.^{8, 9} Care must therefore be exercised, and the rate of transfusion should be slow. If the venous pressure rises, digitalis may be of value (1.5 mg. digoxin intravenously).¹⁰

Cases

Two cases which illustrate the common problems encountered in the treatment of anemia by transfusion are presented.

Case 1.—W. K., a white man aged 45 years, entered the University Hospitals on Oct. 11, 1938, complaining of dyspnea, palpitation and weakness

was 1,280,000 per cu. mm. Diagnostic tests led to the conclusion that the tumor was a primary malignant neoplasm. A small nodule was found on the left side of the neck just superior to the medial end of the clavicle. This was thought to be a metastasis.

She was given sufficient blood to raise her ery-

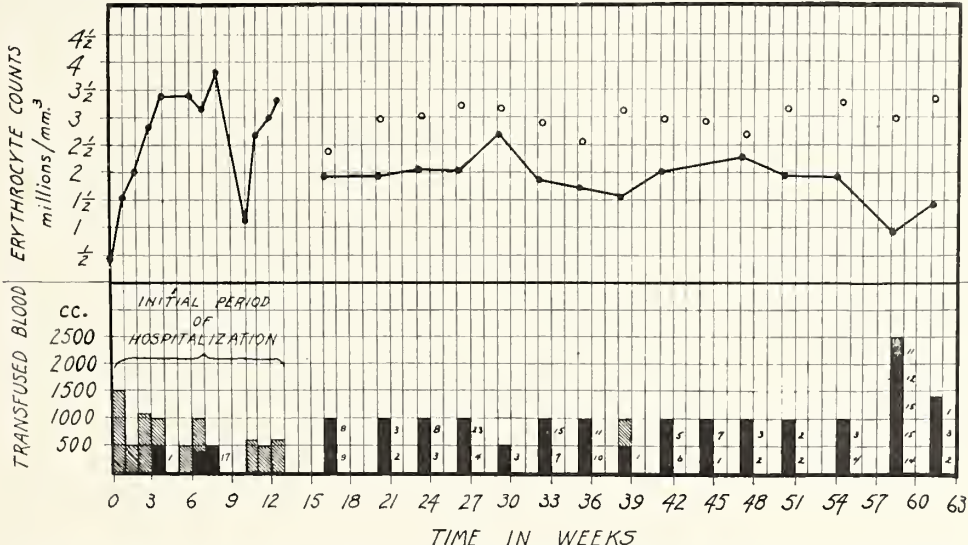


Fig. 1. Erythrocyte counts of a patient with aplastic anemia receiving blood transfusions. The values for the erythrocyte level after each three or four week interval are connected with the solid line. Values for erythrocytes after each series of transfusions are indicated by circles. The volumes of fresh blood transfused are indicated by the cross-hatched areas. Volumes of preserved blood transfused are indicated by solid blocks. Figures adjacent to the blocks indicate days of storage of each lot of blood.

for two months, and swelling of the ankles for two weeks. The history, physical examination and laboratory studies established a diagnosis of aplastic anemia.

During the initial period of hospitalization, which was 13 weeks in duration, he received 15 blood transfusions. He was then discharged and readmitted every three or four weeks for the administration of blood. It will be noted that an average of 1,000 ml. every three weeks successfully maintained his erythrocyte count above 2,000,000 per cu. mm. The counts after transfusion were made within too short an interval to accurately reflect the true degree of augmentation of the circulating hemoglobin. The important fact is that for a period of 15 months this patient was able to lead a useful life and follow his trade of carpentry. However, he developed thrombocytopenia and died of a sudden gastric hemorrhage.

Case 2.—M. D., a 68 year old white woman, entered the University Hospitals on Oct. 30, 1946. She had consulted her physician because of throbbing headache. In the course of examination he discovered a marked anemia and a large tumor arising from the left side of the mediastinum superior to the heart. Because of the latter finding she was hospitalized. Her red blood count

thocyte count to 4,000,000 per cu. mm., and the nodule was removed from the neck. This proved to be an adenoma of the thyroid. She was again transfused, and an exploration of the chest was done, at which time a well encapsulated tumor weighing 380 gm. was removed. This was subsequently classified as an endothelioma. The patient's blood did not improve, and a diagnosis of aplastic anemia was established. She recovered well from the operation and for two years returned frequently to the hospital for transfusion. She required approximately 1 L. of blood every three weeks to maintain her erythrocyte level above 2,000,000 per cu. mm. She developed leukopenia and thrombocytopenia, and became prey to infections, first pneumonia and then pyelitis. She also developed hematuria and bleeding from puncture wounds incident to the administration of penicillin. Larger volumes of blood were given to raise her erythrocyte count above 4,000,000. More vigorous therapy was avoided because of a concomitant arteriosclerotic heart disease. In fact, in preparation for the first operation she suffered circulatory overload following transfusion, which was treated by rapid digitalization and the application of tourniquets. The infections were treated with penicillin, and at the time of writing the patient is still alive. This case illustrates prep-

aring for operation, the use of transfusion in treating infections, and the dangers of circulatory overload as well as the long term replacement therapy for aplastic anemia.

Summary

1. The indications for transfusion in anemic patients together with the goals for transfusion that may be used as a guide to therapy are presented.

The successful operation of a blood bank depends not only upon the initial decision of the medical group to start a blood bank but also upon the continued interest of the members in the use of blood and plasma and the education of their patients in providing donors and paying for the services of the blood bank. It should be noted that, if it is the medical society blood bank, the project automatically carries the sanction of the local medical group. Its services are regulated to meet their needs, and prob-

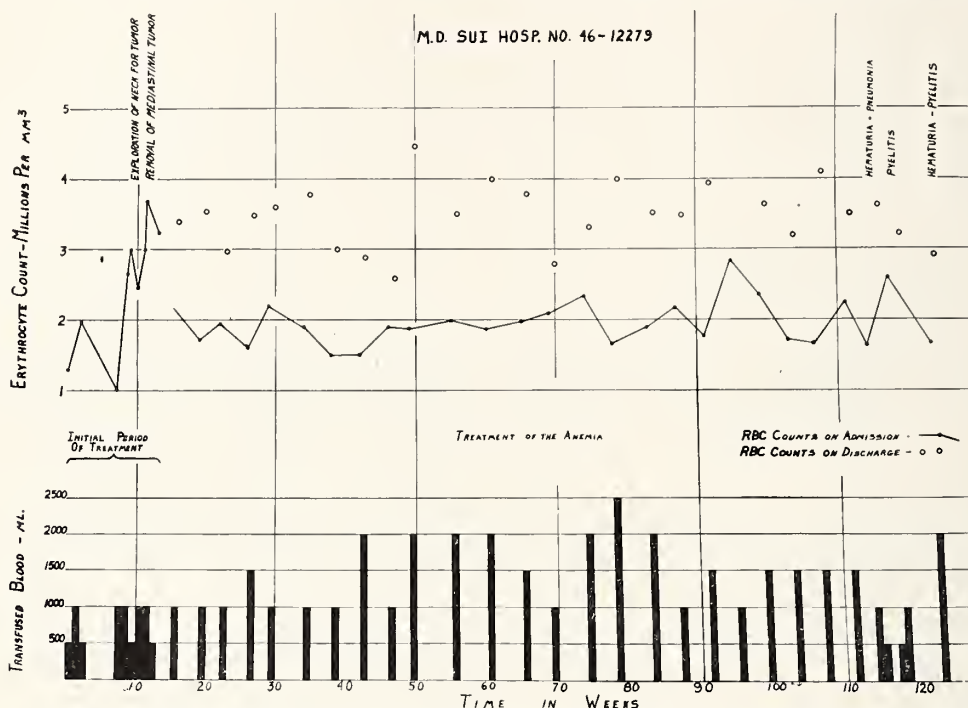


Fig. 2. Erythrocyte counts of a patient with aplastic anemia receiving blood transfusions. The values for erythrocyte levels after each three or four week interval and before transfusion are connected with the solid line. Values after each series of transfusions are indicated by circles. Note the preparation in the initial period of treatment for two surgical procedures and the more frequent transfusions late in the course of disease because of superimposed infection.

2. Total dosage required, the rate of injection and the time necessary for administration in relation to the total volume are discussed.

3. Note is made of the danger of circulatory overload in the severely anemic patient.

4. The various problems are illustrated by suitable case presentations.

Discussion

Forest H. Coulson, M.D., Burlington: From the foregoing discussion it becomes apparent that the proper transfusion treatment of anemias involves the use of considerable quantities of blood. This treatment is best accomplished when the services of a blood bank are available.

It is no longer true that a blood bank is a luxury available only to a large medical center. A community with 175 to 200 hospital beds can support a blood bank, and the following is an outline of steps suggested in establishing such a service:

1. The local county medical society is the group who logically should initiate a transfusion service.

lems of operation that arise may be ironed out by action of the medical society.

2. A blood bank committee appointed by the medical society draws up plans for starting the blood bank and is immediately responsible for its continued operation. The pathologist or other trained personnel of the medical society should be members of the committee. With the sanction of the society, the committee chooses a location for the blood bank and decides upon the equipment to be used and a plan of operation. The blood bank technician should be immediately responsible to this committee and in turn should have the committee's professional interest and support at all times.

3. Expense for equipment and the initial deposit of 15 to 20 pints of blood in the bank for starting capital may be furnished by local civic groups or lodges. Various veteran's groups are also frequently interested in this type of service. Running expenses are provided by a fee charged the patient for each pint of blood processed and delivered for use by the individual doctor. Donors are best provided by the

relatives and friends of the patient receiving the transfusions. It is not practical to expect a civic group or organization within a locality to furnish donors over a long period of time for this type of project.

4. An educational program should be carried on by the local medical society. This includes instruction in the use of equipment furnished by the blood bank, indications and contraindications for the use of blood or plasma, recognition and treatment of transfusion reactions, regular reports on the operation of the blood bank and control of publicity given the project.

In summary, it seems that at a time when critical eyes are reviewing medical services available in every community each local medical society should be interested in providing as complete a service as possible. Commercial blood bank equipment now available makes it practical for blood banks to be operated efficiently outside large medical centers. When the services of a blood bank are available, the conditions discussed by Dr. Hardin and emergency conditions requiring blood immediately can be efficiently treated in local hospitals.

BIBLIOGRAPHY

1. Kilduffe, Robert A.; and DeBakey, Michael: *The Blood Bank and the Technique and Therapeutics of Transfusions*. St. Louis, C. V. Mosby Co., 1942.
2. Fowler, Willis M.: *Hematology for Students and Practitioners*. New York, Paul B. Hoeber, Inc., 1945.
3. Marriott, H. L.; and Kekwick, A.: Volume and rate in blood transfusion for relief of anaemia. *Brit.M.J.*, i:1043-1046 (June 29) 1940.
4. Bock, A. V.: Constancy of volume of blood plasma. *Arch. Int. Med.*, xxvii:83-101 (January) 1921.
5. DeGowin, E. L.; Hardin, R. C.; and Alsever, J. B.: *Blood Transfusion*. Philadelphia, W. B. Saunders Co., 1949.
6. MacQuaide, D. H. G.; and Mollison, P. L.: Treatment of anaemia by transfusion of concentrated suspensions of red cells. *Brit. M. J.*, ii:555-556 (Oct. 26) 1940.
7. McMichael, J.; Sharpey-Schafer, E. P.; Mollison, P. L.; and Vaughan, J. M.: Blood volume in chronic anaemia by concentrated corpuscle-haemoglobin method, with data from differential-agglutination and dye methods. *Lancet*, i:637-640 (May 22) 1943.
8. Sharpey-Schafer, E. P.: Transfusion and anaemic heart. *Lancet*, ii:296-299 (Sept. 8) 1945.
9. Sharpey-Schafer, E. P.: Cardiac output in severe anemia. *Clin.Sc.*, v:125-132 (August) 1944.
10. McMichael, J.; and Sharpey-Schafer, E. P.: Action of intravenous digitoxin in man. *Quart.J.Med.*, xiii:123-135 (October) 1944.

ANTICOAGULANT THERAPY IN SURGICAL PATIENTS

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The preparation of crude heparin from liver by McLean¹ in 1916 contributed the first of the anticoagulant agents now in common use. Howell and Holt,² Mason,³ and others anticipated its clinical use, but it was not until relatively pure and potent preparations were available, and more efficient methods of extraction devised, that this became feasible. In recent years its use has been widespread, so that experience based on large series is now becoming available.

When Link⁴ and co-workers isolated the factor responsible for toxic sweet clover hemorrhagic disease in livestock, it was soon appreciated that

this factor, dicumarol, might be an additional clinical tool in the control of vascular disorders characterized by an abnormal tendency to clot. Such has proved to be the case.

These agents have found use in the spheres of both arterial and venous disorders. Considerable current interest is present, as their usefulness is increasingly apparent in the treatment of coronary heart disease.⁵ In surgery their use must be considered from the standpoint of both prophylaxis and actual treatment. There exists some lack of unanimity in reference to these two phases of usage.

While arterial injuries are not rare, and surgical treatment of the heart and great vessels is becoming increasingly common, this aspect of the surgical use of these anticoagulant agents is relatively minor as compared to the huge problem of venous thrombosis and pulmonary embolism. There is conflicting evidence in almost every aspect of this problem, such as the frequency of pulmonary embolism as the cause of death, the question of embolism versus thrombosis in situ (primary thrombosis) in the pulmonary arterial bed, the frequency of clinically diagnosed venous thrombosis in reference to the number of patients dying of embolism and the relationship of early ambulation. There appear to be unsupported statements concerning the role of geography, season and weather. Some other aspects are now in fairly general agreement, i.e. the effect of the presence of neoplasms,⁶ of old age and of infection. Many other factors have been incriminated. It is not possible in this discourse to attempt to clarify these issues completely. Certainly, in our experience in the University Hospitals, pulmonary embolism is a common postmortem finding, more frequent than in some of the recent reports.^{7,8}

Dr. E. J. Boyd, of the Department of Pathology, in reviewing the incidence of pulmonary embolism in the University Hospitals in the five year period, 1942-1946, found in 1,409 autopsies performed an incidence of 116 cases of pulmonary embolism. In 42 instances the embolism was massive and considered to be the unequivocal cause of death. In the remaining 74 there had been either infarction or small emboli. In comparing the year from July 1, 1945, through June 30, 1946, to the same period in 1935-1936, Dr. Boyd found that the over-all incidence in 1945-1946 was 16.4 per cent of all adult autopsies and 7.7 per cent in the 1935-1936 period. It was of interest that the average age of the embolism patients in 1945-1946 period was 66.6 years as compared to 56.5 years 10 years earlier. It was of interest also in these two years under comparison that the ratio of post-operative patients to heart disease patients, the

two largest contributors to the total incidence of embolism, was the same, namely, 4 to 3. The University Hospital autopsy data cannot supply answers to the question of whether thrombosis *in situ* in the pulmonary bed is common or rare or how many had detectable preembolism warning states. However, of one thing we can be sure: the relationship to old age is striking.

The twin problems, how to prevent abnormal venous thrombosis and death or disability as sequelae and how to treat these conditions once established, must be analyzed separately. Let us first consider therapy, and not prophylaxis. Such conflicting views as now exist in regard to therapy must have their origin in the limitation of both of the current therapeutic approaches. Some of those who most ardently support the ligation and interruption therapy have had occasional patients who have had fatal embolism. Such sources of embolism as the renal veins and the right auricle are inaccessible to ligation. Some sites of thrombosis are not likely to be diagnosed, such as those in the periprostatic or perivesical venous plexuses. Certainly, empiric ligation of the femoral veins bilaterally, even if prompted by the appearance of a warning embolus, can scarcely be of aid in such instances and doesn't correct the underlying clotting disorder. The amount of end disability produced by ligation of the deep veins superior to the level of the profunda femoris has not been fully determined. Some enlightenment on the case for anticoagulant therapy should be forthcoming from the experience of those who have applied anticoagulant therapy to large numbers with clinically established thromboses. There have been many reports concerning the use of anticoagulant drugs in treatment. Most of the recent ones⁹ clearly indicate that they play a useful role and substantiate the enthusiasm that characterized the early clinical reports on the subject. This does not seem altogether logical when one considers the actions of these agents.

Let us first survey the action of dicumarol with its prothrombin-depressing effect. It seems difficult to reason how this can have the effect of dissolving the clot already formed or of lessening the likelihood of its breaking off. This is probably true, but it may prevent thrombosis at other sites, including reducing the likelihood of thrombosis *in situ* in the pulmonary arterial tree and lessening the likelihood of propagation of the thrombus already formed. These listed actions may at least partially explain the apparent reduction in the incidence of pulmonary embolism where it has been extensively used.

The action of heparin is not on a single aspect of the blood coagulation mechanism.¹⁰ It appears

certain that heparin has both an antithrombin action and an antiprothrombin action. Thus heparin interferes with the action of thrombin and decreases the amount of thrombin formed. From experimental studies of Loewe¹¹ and co-workers it would appear that it may also have the property of speeding recanalization and development of collateral circulation and may hasten dissolution of clots up to the sixth day after thrombus formation.

Among the various workers reporting the use of the anticoagulant drugs in the treatment of established thromboses, the initial use of both agents is the rule. Both are started simultaneously and the faster-acting heparin acts during the relatively long (two day) latent period before the dicumarol effect is established. Then, ordinarily, the heparin is discontinued. Continuation of heparin therapy may render it difficult or impossible to adequately control the level of dicumarol administration, since ordinary one stage prothrombin determinations may be invalidated for some hours after each dose of heparin is given.

The role of the anticoagulants in prophylaxis has recently been strengthened by the reports of large series, particularly those by Wise and co-workers,¹² Allen and others,¹³ and Donaldson.¹⁴ From these and others it would appear that valid statistical evidence is at hand to support their usefulness. In the report of Wise and his group a controlled study was conducted. Dicumarol was given prophylactically in 3,304 patients with 0.1 per cent thromboembolic complications as compared to 1 per cent incidence in a comparable group of simultaneous controls. If these reports are true, then what should deter one from the immediate use of these agents not only in prophylaxis but in treatment?

Let us first consider heparin. If one gives aqueous solution intravenously, it may ordinarily be given intermittently as infrequently as every four hours. This still imposes a severe load on the physician caring for the patient, for the administration of the drug can hardly be entrusted to the nursing staff. Blood coagulation times should be obtained by a reliable method and done consistently both in regard to method and personnel, so that the inherent errors in this technic will not be needlessly magnified. It would seem from available evidence that at the present time a modified Lee-Howell technic is most commonly employed. The continuous intravenous drip method of administration is no less burdensome than the intermittent intravenous injection and is often extremely tricky to regulate. It is trying to the immobilized patient and to patients in whom large

amounts of fluids are contraindicated, and may prove to be a hazard in overloading the patient's circulation. In either instance frequent coagulation time checks should be made if one is to maintain an effective level of heparinization.

In the past few years heparin has been available in the Pitkin menstruum, either with or without an accompanying vasoconstrictor so that it may be given subcutaneously. In our experience, this material produces severe pain in an appreciable number of the patients. Adjustment to obtain reversal of the heparin effect is not readily feasible, and one can at present only resort to blood transfusion if serious overdosage has been given. Usually, simple cessation of the drug suffices, for there is rapid return to normal coagulation. However, recent work does show that almost immediate reversal may be attained with the use of protamine.¹⁵ While neutralization by means of this agent has been known for some time, since the report of Chargaff and Olson,¹⁶ its use heretofore in patients has been generally considered contraindicated because of toxicity. To administer heparin intravenously, either intermittently or continuously, is expensive. Heparin in Pitkin menstruum is more expensive and during the time of administration can even exceed all of the other costs of ordinary hospitalization.

Dicumarol, on the other hand, is low in cost and extremely easy to administer, as it is given orally. However, its prothrombin-depressing action is always somewhat unpredictable. Common experience has shown its effect is much greater in face of liver damage, so much so that its use under such circumstances is generally condemned. In the event of overdosage with dicumarol the reversal is not easily obtained and, if severe bleeding occurs, may require one or several fresh blood transfusions to effect control. Sole reliance should not be placed on the use of synthetic vitamin K. The hypoprothrombinemia may continue, or even get worse, for up to several days after cessation of the drug. We have had this brought to our attention embarrassingly by having a patient readmitted to the hospital, bleeding from an operative wound. He had been discharged from the hospital several days after cessation of oral dicumarol.

After all of these derogatory remarks regarding the ineffectual instances, the cost, difficulties of administration and dangers of bleeding, what is there to say for anticoagulant therapy? Namely, that where indicated for either prophylaxis or treatment the objections can be overcome by careful selection of patients. Those who personal and collected experience have shown are likely to de-

velop thrombosis or embolism are candidates for prophylactic use of these agents. Again, with reference to our own autopsy studies, and in comparing these with similar reports that have recently been published, one is struck by the repetitious nature of fatal pulmonary embolism in certain classes of surgical patients. They are the very old, the very obese, those with carcinoma (particularly of the pancreas, lower gastrointestinal tract and urinary tract), and those with wounds associated with large tissue defect or considerable suppuration. Certainly those disorders which experience shows most likely to be associated with abnormal venous clotting and pulmonary embolism should be considered in the light of prophylaxis. This should probably logically include those patients who have had previous episodes of thromboembolic disease. I do not believe that rigid rules should be applied, for the institutional experience may differ from place to place, and as much individualization as possible should be done so that prophylaxis is not applied needlessly.

Those patients in whom a clinical diagnosis of thrombosis is made, whether it be an early so-called bland thrombus or full blown thrombophlebitis, are in need of treatment. It is the problem of the physician caring for the patient to decide whether it shall be venous interruption or anticoagulant therapy. I hold with the view, from some experience with both methods of treatment, that individualization in therapy and sometimes a combination will produce better results than restriction to either method alone for all patients. In a patient with bland thrombosis in the distal portion of the lower extremity, ligation of the superficial femoral vein is relatively easy to do technically and in a number of my patients observed over a number of years is not followed by edema or ulceration. The underlying defect producing the thrombosis is not corrected, but the hazard of embolism from that source is greatly diminished. On the other hand, where there exists evidence of thrombosis at higher levels or at multiple sites, or where the site is uncertain or obscure, anticoagulant therapy is indicated unless some specific contraindication exists. These contraindications include the nature of the patient's underlying disorder, such as severe hepatic or renal disease. If blood dyscrasia exists, or if hemorrhage in an operative site, for instance a brain tumor bed, should be a hazard to life, then the possible benefits to be gained are outweighed by the dangers. There exists another factor: one must have the facilities and appropriate organization for the careful and accurate accomplishment of the laboratory procedures, especially for

the daily determinations of the prothrombin levels. If dicumarol is used in this connection, one might state that almost all of the control has been with one or another of the one stage prothrombin procedures.

It doesn't make much difference which one of the various modifications is used provided the conditions of the test are carefully standardized and the prothrombin times of the patient's blood are simultaneously compared to normal control blood. In our own experience, the so-called bedside-test¹⁷ is as simple to perform and as reliable as the more complicated tests.¹⁸ Whichever procedure is used, it should be done under rigidly controlled conditions and the facilities should be available seven days a week. In addition, blood transfusion facilities must be readily available in the event that severe hemorrhage is encountered. It is easy to find surgeons who are discouraged with anticoagulant therapy, for any who have had extensive experience with the use of anticoagulants in the treatment of thromboembolic disease will have encountered failures. From personal experience this author has encountered three such disasters. From the very nature of the indications listed earlier, surgeons tend, when individualizing the treatment of thromboembolic disease, to use the anticoagulant drugs in those instances less likely to give success, that is, to employ surgical interruption when an easily accessible early thrombosis is present and to use anticoagulant therapy when there is equivocation about the site of the clot or if multiple thromboses are present. From this standpoint, the anticoagulants serving as "court of last appeal" can no more justifiably be blamed for failure than surgical therapy under such instances when neither may give results.

From the current evidence^{19, 20} the useful role of the anticoagulant drugs in preventing thrombosis at the site of arterial anastomosis or repair is rather well established. The routine use in this regard is not universal. It would appear that in those sites where hemorrhage at or near the site of arterial repair does not jeopardize life both prophylactic and therapeutic use is justifiable, with perhaps heparin being more efficient. We have practiced the use of heparin for brief periods after arterial embolectomy in the majority of instances. There are scattered reports of the use of heparin in the treatment of arterial embolism and thrombosis. The clinical evidence in this regard is still debatable.^{21, 22}

Summary and Conclusions

The use of the anticoagulant drugs, heparin and dicumarol, in the prophylaxis of intravascular clotting is becoming well established. Specificity in selection of those patients most likely to get

into difficulty is indicated, so that the hazards of the anticoagulant therapy do not outweigh the inherent hazards of embolism or thrombosis. The available laboratory methods for detecting incipient thromboembolic states are not yet generally accepted.

The use of the anticoagulant drugs in treatment of established thrombosis is justifiable, providing caution is used in the selection of patients and the appropriate facilities for control are available.

The active treatment of thromboembolic disease should be considered obligatory. Careful individualization with the use of surgical ligation and anticoagulants, and occasionally both, should lower the over-all incidence of fatal embolism and the less distressing sequelae of thromboembolic disease, and is to be preferred to depending upon either as a sole weapon for all patients or, worse, to providing no treatment at all.

BIBLIOGRAPHY

1. McLean, J.: Thromboplastic action of cephalin. *Am. J. Physiol.*, xli:250-257 (August) 1916.
2. Howell, W. H.; and Holt, E.: Two new factors in blood coagulation — heparin and pro-antithrombin. ? *Am. J. Physiol.*, xlvii:328-341 (December) 1918.
3. Mason, E. C.: Blood coagulation; production and prevention of experimental thrombosis and pulmonary embolism. *Surg. Gynec. & Obst.*, xxxix:421-428 (October) 1924.
4. Link, K. P.: Anticoagulant from spoiled sweet clover hay. *Harvey Lect.* (1943-1944) xxxix:162-216, 1944.
5. Bean, W. B.: Anticoagulants in treatment of acute myocardial infarction and its complications. *J. Iowa M. Soc.*, xxxix: 149-152 (April) 1949.
6. Sproul, E. E.: Carcinoma and venous thrombosis: frequency of association of carcinoma in body or tail of pancreas with multiple venous thrombosis. *Am. J. Cancer*, xxxiv:566-585 (December) 1938.
7. Zimmerman, L. M.; Miller, D.; and Marshall, A. N.: Pulmonary embolism: its incidence, significance and relation to antecedent vein disease. *Surg. Gynec. and Obst.*, lxxxviii:373-388 (March) 1949.
8. Crutcher, R. R.; and Daniel, R. A., Jr.: Pulmonary embolism: correlation of clinical and autopsy studies. *Surgery*, xxiii: 47-62 (January) 1948.
9. Felder, D. A.: Evaluation of various clinical signs of thrombophlebitis and experience in therapy with anticoagulants. *Surg. Gynec. and Obst.*, lxxxviii:337-350 (March) 1949.
10. Jorpes, J. E.: Origin and physiology of heparin; specific therapy in thrombosis. *Ann. Int. Med.*, xxvii:361-370 (September) 1947.
11. Loewe, L.; Hirsch, E.; and Grayzel, D. M.: Action of heparin on experimental venous thrombosis. *Surgery*, xxii:746-760 (November) 1947.
12. Wise, W. D.; Loker, F. F.; and Brambel, C. E.: Effectiveness of dicumarol prophylaxis against thrombo-embolic complications following major surgery; a four year survey; 3,304 cases. *Surg. Gynec. and Obst.*, lxxxviii:486-494 (April) 1949.
13. Allen, E. V.; Hines, E. A., Jr.; Kvale, W. F.; and Barker, N. W.: Use of dicumarol as anticoagulant; experience in 2,307 cases. *Ann. Int. Med.*, xxvii:371-381 (September) 1947.
14. Donaldson, G. A.: Therapy and prophylaxis of venous thrombosis and pulmonary embolism. *S. Clin. North America*, xxvii:1037-1051 (October) 1947.
15. Cowley, L. L.; and Lam, C. R.: Neutralization of heparin by protamine. *Surgery*, xxiv:97-99 (July) 1948.
16. Chargaff, E.; and Olson, K. B.: Studies on chemistry of blood coagulation; studies on action of heparin and other anticoagulants. Influence of protamine on anticoagulant effect in vivo. *J. Biol. Chem.*, cxxii:153-167 (December) 1937.
17. Ziffren, S. E.; Owen, C. A.; Hoffman, G. R.; and Smith, H. P.: Control of vitamin K therapy. Compensatory mechanisms at low prothrombin levels. *Proc. Soc. Exper. Biol. Med.*, xl:595-597 (April) 1939.
18. Fisher, B.: Some clinical observations on prothrombin test. *Am. J. Clin. Path.*, xvii:471-478 (June) 1947.
19. Kiesewetter, W. B.; and Shumacker, H. B., Jr.: Experimental study of comparative efficacy of heparin and dicumarol in prevention of arterial and venous thrombosis. *Surg. Gynec. and Obst.*, lxxxvi:687-702 (June) 1948.
20. Shumacker, H. B.; Abramson, D. I.; and Lampert, H. H.: Use of anticoagulants in surgery of aneurysms and arterial venous fistulas, with particular reference to dicumarol. *Surgery*, xxii:910-918 (December) 1947.
21. Richter, I. H.; Eiber, H. B.; and Loewe, L.: Subcutaneous heparin in treatment of arterial thrombotic disease; preliminary report. *Surgery*, xxii:489-495 (September) 1947.
22. Reynolds, J. T.; and Jirka, F. J.: Embolic occlusion of major arteries. *Surgery*, xvi:485-518 (October) 1944.

THE INCIDENCE OF GLAUCOMA

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Glaucoma has always been a puzzling disease. The ancients had it classified as a disease causing a blind eye with a peculiar greenish color to the pupil. They recognized the dilated pupil and the peculiar vascularization that comes with these blind eyes. Then, in time, the term was limited to the blind hard eye. In more recent times, with continued study with the ophthalmoscope and microscope, glaucoma has come to mean an increased tension with optic atrophy and characteristic field losses. There have been various classifications, but all have basically divided the disease into primary and secondary glaucoma, with the primary glaucoma being subdivided into two forms. Different names were applied to these two forms, among others, acute glaucoma and glaucoma simplex, uncompensated and compensated glaucoma, inflammatory and noninflammatory glaucoma, all presenting the same two pictures. Recently, the use of the gonioscope has developed a classification of wide angle and narrow angle glaucoma.

It is difficult, in reviewing the literature, to find any exact incidence of the disease itself or of these types. For the disease itself the statistics on its incidence vary from 8.4 to 0.02 per cent of all admissions.^{1, 2} They generally run around 2.5 to 3 per cent. A recent survey of the general population found an incidence of a little over 2 per cent of undiagnosed cases in people over 40.³ Statistics on the age of onset also vary, some putting the highest incidence in the fourth decade, others in the fifth and still others in the sixth.^{4, 5} And, again, there are also variations in the relative proportion of cases classified as acute glaucoma.

The chronic, or simple glaucoma, has been studied more in recent years, and more has been found out about it as to characteristic field loss, recurring episodes of rise in tension and the tension curves. When a resident in Chicago, I used to listen to Dr. Kronfeldt talk on glaucoma. I was impressed by the high incidence which he would report, and also by his evangelistic attitude toward looking for the disease. Once I heard him say that he thought it would be an excellent idea to have a station in the Union Depot to test for glaucoma, just as they have machines there for checking blood pressure and the strength of one's grip.

Glaucoma and its early recognition were stressed at the recent meeting of the Academy in Chicago. While there I was interested to find in talking to some of the exhibitors that

they were picking up many more early cases of glaucoma in their clinics. Dr. H. S. Sugar told me of his experience at the Glaucoma Clinic of the Detroit Receiving Hospital. When they started routine tonometer checks on all patients over 45, they had only 18 glaucoma patients, all with advanced glaucoma. In nine months they had 118 glaucoma patients, "a high proportion of which were in the earliest stages."⁶

When I returned home I reviewed my cases of glaucoma for the preceding year. Of 720 patients over the age of 45 whom I had seen, 37 were found to have glaucoma, or 5 per cent. Of these 37 patients, 18 had what I would call obvious glaucoma and 19 hidden glaucoma. By *obvious* cases, I mean those who were either referred to me as glaucoma patients when they moved to Waterloo from other towns, or whose vision was way-down with obvious cupping of the disc and high tension, or who were in an acute episode of glaucoma. By *hidden* cases I mean those patients in which no pathology was obvious. Their vision was 20/30 or better, and tactile tension was normal at first examination, but on taking their tension with the tonometer it was found to be elevated. I took as a rule-of-thumb any reading over 3, or 27 mm. of mercury, on my tonometer.

Of these 18 patients I classified as obvious glaucoma cases, 6 patients knew they had it when they came into the office; 9 had a vision of 20/70 or less but did not know the diagnosis; 2 knew their vision was down but were not too impressed by it, and 1 was in an acute stage. Their age ranged from 60 to 85 years, with an average age of 75.

Of the 19 patients classified as hidden cases, 1 was picked up when I examined all other relatives of a known glaucoma patient; 2 showed a suggestion of cupping of the disc but had normal vision; 16 had a tension over 27 mm. of mercury, or 3 on the tonometer. These patients on a drinking test had a rise of 10 points or more. Their tension was found to be at one time or another over 34 mm. of mercury, and they all showed field changes. There were others who did not show these findings but were questionable. They will come back every six months for a follow-up study. The average age in this group was 64, ranging from 45 to 86 years of age.

This classification is not scientific, but it is illuminating. The statistics on the group of obvious cases run fairly well with those generally given, 2.5 per cent of all admissions, and their breakdown is similar. On the other hand, the hidden cases run close to what was found in a survey of the general population. The age of

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onset for the hidden group is 10 years younger than the age of onset for the obvious group.

In comment, it would appear that some of the variation in statistics recorded is due to variations in the effort made to diagnose the condition. Those making more serious attempts to find glaucoma find a higher incidence, with the age of onset lower and the proportion of cases of simple glaucoma higher. I am impressed by the fact that taking tensions in everyone over 45 showed up as many hidden cases of glaucoma as I picked up by just the ordinary routine. These patients on an average were 11 years younger than those with obvious glaucoma. To my mind, they are the ones who probably can be helped the most, for the only treatment we know at this time for glaucoma is to keep the tension under control. It seems easier to keep tension down when the glaucoma is recognized at an early stage, for the more advanced the condition becomes, the harder it seems to maintain tension.

Summary and Conclusion

A review is presented of 720 patients, all over the age of 45, who were seen in the period of one year. Thirty-seven were found to have glaucoma, of which 18 patients had obvious glaucoma and 19 had hidden glaucoma. The average age of the patients with obvious glaucoma was 75 years and that of the hidden cases 64 years.

By routinely taking the tension of all patients over 45, many more early cases of glaucoma can be found.

Discussion

Carl A. Noe, M.D., Cedar Rapids: Any procedure that helps in the early diagnosis of glaucoma is of great value. The one that Dr. Phelps advocates is not difficult to carry out and is entirely harmless, except for the possibility of an occasional drug sensitivity to the anesthetic agent employed. We all know that the diagnosis of glaucoma cannot be made entirely on the basis of increased intraocular tension and that careful field analysis is necessary to determine if the tension found is detrimental to that particular eye. To be of value, such fields must be made under controlled lighting and at threshold distances such as can be obtained by using a tangent screen and a 1 mm. white target at a distance of 1 or 2 meters. We have all seen patients with comparatively high tensions and little, if any, field loss and also those with considerable field loss and relatively low tension.

After the diagnosis is once made, the seriousness of the condition must be impressed upon the patient. For some people, as long as they see perfectly well and comfortably, it seems hard to understand that they have a serious eye disease which will lead to blindness unless controlled. It is necessary to have the complete confidence of our patients.

I am certain that all of us would make fewer mistakes and our patients would profit much if we followed Dr. Phelps' example in taking more tonometric readings on our older patients.

BIBLIOGRAPHY

1. Duke-Elder, Sir W. Stewart: Textbook of Ophthalmology. St. Louis, C. V. Mosby Co., 1941. vol. iii, p. 3328.
2. Holst, J. C.: Statistical study of glaucoma. *Am.J.Ophth.*, xxx:1267-1275 (October) 1947.
3. Carpenter, Evelyn M., director, Philadelphia Committee for Prevention of Blindness, Inc.: Personal Communication.
4. Gros, B. H.: Glaucoma sur des jeunes sujets. *Ann.d'ocul.*, clxxx:366-375 (June) 1947.
5. Fischer, F. P.: Senescence of the eye, chap. 33 of Ridley, F.; and Sorsby, A., editors; *Modern Trends in Ophthalmology*, ed. 1, London, Butterworth and Company, 1940. p. 54.
6. Sugar, H. S.: Newer concepts in diagnosis of glaucoma. *J. Michigan M.Soc.*, xlvii:721-728 (July) 1948.

College of Medicine State University of Iowa CLINICOPATHOLOGIC CONFERENCE

September 28, 1949

Summary of Clinical Record

A 33 year old white male truck driver entered the urology service on March 12, 1949. During his service in the army from 1942 to 1946, no mention had been made of any organic disease. He had been well until about seven months before admission to the hospital, when he had an upper respiratory infection associated with a sore throat. Following this he noted excessive fatigue and nonspecific languor. In December 1948, approximately three months before admission, the patient as well as his wife and brother contracted what was termed "stomach flu," characterized by some nausea, vomiting and diarrhea. Within a week the wife and brother recovered, but the patient continued to have periods of nausea and vomiting. Occasionally the vomitus contained blood. He had no abdominal pain and no change in bowel habits aside from one episode of diarrhea, which was relieved by paregoric. There were no significant urinary symptoms. Generalized aching was experienced in the joints of the hands and feet, but there was no edema. These symptoms continued until the time of his admission. During the month before admission he noted bleeding from the gums but none elsewhere.

On admission he looked chronically ill and was pale and thin. There was bleeding at the gingival margins. The tongue and pharynx were dry. The lungs were clear. The heart was normal to physical examination. The blood pressure was 140/90. The pulse was normal. The abdomen and rectum were negative. The genitalia were

normal. Examination of the extremities and the neurologic nervous system failed to reveal any positive findings.

The urine was grossly clear, had a pH of 7.0 and specific gravity of 1.010. Chemical tests were negative for albumin, sugar and blood. Microscopic examination of the centrifuged urine showed 10 white blood cells per high power field and a few cellular and granular casts. The blood hemoglobin was 12 gm. per 100 ml. The red blood cell count was 3,200,000 per cu. mm. The white blood count was 21,000. The blood film was essentially normal. The blood urea nitrogen was 231 mg. per 100 ml. The blood creatinine was 26 mg., and the carbon dioxide combining power was 38 volumes per 100 ml. The total plasma protein was 7.41 gm. per 100 ml. The albumin was 4.72 gm. and the globulin 3.34 gm. The serum calcium was 6.5 mg. per 100 ml. and the phosphorus 19.5 mg. The blood chlorides were 538 mg.

Three days after admission the patient complained of difficulty in voiding. He was catheterized and 1,100 cc. of residual urine were obtained. Because of this he was seen by the neurologist who found no definite lesions of the nervous system.

The van den Bergh reaction was indirect with a bilirubin of 0.9 mg. per 100 ml. The cephalin flocculation test was negative at 24 hours and 1 plus at 48 hours. The hematocrit was 35 per cent. Bleeding time was more than 10 minutes. Coagulation time was 7 minutes, 45 seconds. Prothrombin time was 1 minute, 40 seconds, while the control was 36 seconds. Hemolysis of the red cells began at 0.42 per cent NaCl solution and was complete at 0.32 per cent. Platelet count was 44,000 per cu. mm. Reticulocyte count was 0.4 per cent. Sedimentation rate was 101 mm. in one hour. On March 17 the 24 hour urinary calcium and phosphorus excretion was measured and showed 42 mg. calcium and 262 mg. phosphorus. The urea clearance determined on that day was 2.8 per cent of normal. The serum sodium was 350 mg. per 100 ml. and the serum potassium 24.9 mg. The urinary output during the patient's entire stay in the hospital remained good, varying between 1,000 and 2,000 cc. per day. On March 19 a cystoscopic examination was carried out. The bladder was entirely normal. The right ureter was catheterized, and no obstruction in the ureter was found; the pyelogram was normal. An x-ray film of the chest and an electrocardiogram made on March 18 were normal.

During the patient's entire stay in the hospital, except for the last day, he was afebrile. He continued to have bleeding from the gums and occa-

sional epistaxis. The azotemia remained unchanged, and he appeared to be growing weaker. He was transferred to the medical service on March 18 and died on March 22, 1949, with the findings essentially unchanged.

Clinical Diagnosis

Interstitial nephritis or nephrosis.

Dr. Ruben A. Flocks (Urology): This is an extremely interesting case and yet at the same time quite a puzzle. It presents three problems which have to be explained. He was sick for about 7 months prior to the time that he came to this hospital. When he came here, he was chronically ill and showed three things. First, there were evidences of renal insufficiency; second, there were changes in his blood picture, and, third, there was a sudden death. Now, let us discuss first the problem of the kidneys. What were the manifestations of renal insufficiency? They were primarily azotemia, a low serum calcium, a high serum phosphorus, secondary anemia and evidence of chronic illness. What type of lesion was present in the kidneys to cause this type of picture? The blood picture was peculiar in that there was a low platelet count, only a mild secondary anemia, a slight leukocytosis and evidence of hemorrhages, which he had for several months during the course of his illness. Could this blood disorder be associated with his renal insufficiency, was it separate or was it just another manifestation of a disease which was causing the renal insufficiency? Now, I would like to ask Mr. Brown, who is the senior student representative, what conclusion the students came to this morning in regard to the nature of the lesion in the kidneys which brought about the azotemia and the changes in the blood calcium and phosphorus.

Mr. Brown (Student): We explained the increase of urea nitrogen or nonprotein nitrogen in the blood on the basis of a decrease in renal function. Associated with the decrease in renal function, there was a retention of phosphorus in the blood. By the increase of phosphate the calcium was depressed, since the two combine to give a solubility product which is limited by their mutual solubility in the blood.

Dr. Flocks: What do you think was the nature of the renal lesion that brought about this decreased renal function?

Mr. Brown: The majority of us thought that this was a glomerulonephritis, which arose 7 months previously with the streptococcus sore throat, if such he had.

Dr. Flocks: In what way do you think that this did not show the typical findings of a sub-acute glomerulonephritis?

Mr. Brown: In the single urine specimen, which was presented in the protocol, there was no albumin present, and that, I understand, is typical of glomerulonephritis. In addition, there were no red cells present and, I understand, that too is evidence of acute glomerulonephritis.

Dr. Flocks: You felt then that he had an upper respiratory infection as a precursor of glomerulonephritis. What do you think about the blood pressure?

Mr. Brown: As I understand it, about 70 per cent show a severe hypertension but about 30 per cent do not have to show such a pronounced hypertension.

Dr. Flocks: Do you think there is any hypertension here at all?

Mr. Brown: 140/90 is a slight hypertension.

Dr. Flocks: What did you think about the blood picture?

Mr. Brown: We believe that the blood picture could be completely explained on the basis of impaired renal function. The retention of nitrogen was evidence of kidney damage and the hemorrhagic tendencies led to secondary anemia.

Dr. Flocks: What about the bleeding tendencies and the low platelet count?

Mr. Brown: Supposedly, those are part of the toxic manifestations of a symptom complex which we call uremia.

Dr. Flocks: What did you think about the cause of death? Why did he die so suddenly?

Mr. Brown: We had no definite cause for sudden death.

Dr. Flocks: What are the usual ways that a patient with glomerulonephritis dies?

Mr. Brown: He may develop a high arterial pressure and have a cerebral accident. He may develop an enlarged heart with severe cardiac damage which leads to cardiac insufficiency, or they may die of uremia. The latter, I believe, is least common.

Dr. Flocks: In our discussion of the case we paid a great deal of attention to the blood pressure. The blood pressure was not elevated, and, from my own experience, patients who have had severe and long-lasting retention of metabolites with a lesion of the glomeruli have had a hypertension. The absence of hypertension in the presence of chemical evidences of renal insufficiency made me feel that there would be in the microscopic examinations of these kidneys little vascular damage and therefore little glomerular damage. The lesion in this case would have to be in the tubules and interstitial tissues of the kidney. For example, patients with chronic pyelonephritis, cases of which we see frequently, or patients with bilateral congenital hydronephrosis have severe

azotemia and die of renal insufficiency without hypertension. They do not have significant vascular disease and glomerular disease. In the consideration of the renal insufficiency in this case our attention was turned primarily to tubular damage or a lesion of the interstitial tissues of the kidney. One of the first things that one would think of would be a chronic pyelonephritis. Pyelonephritis which originated due to a lesion in the urinary passages would be associated usually with a large amount of pus in the urine, and pyelography and cystoscopy would show a lesion. We found few pus cells in the urine. A cystoscopic examination and retrograde pyelogram on one side were entirely normal. It appeared that chronic pyelonephritis producing a lesion of the tubules and interstitial tissues and originating from a primary disease of the urinary passageway was reasonably well ruled out. That led us to consider the possibility of an infection elsewhere in the body, possibly a sore throat, which he had originally. There might also have been exposure to some poison which we couldn't elicit from the history which produced a lesion of the tubules and the interstitial tissues of the kidney and possibly at the same time produced the changes in the blood system which he manifested. The end result of a "burnt out" chronic pyelonephritis could have produced this picture. Dr. Kirkendall, could I have checked myself in trying to find out if the glomeruli in this case was all right and if the tubules were damaged, or whether they were both damaged or whether the glomeruli was damaged and the tubules were all right?

Dr. Kirkendall (Internal Medicine): I think you might have done so seven or eight months before, but I don't think it would have told you any more at the present time or at the time of this man's death than we knew from the urea clearance and from the examination of the urine, particularly the specific gravity. I think it is possible to tell from the relatively simple tests that there was definitely a glomerular lesion or some obstruction to the products of the glomerular filtrate reaching the bladder. None of our renal function tests (differential) would have told us any more than that. Likewise, at this stage of development all of the other renal function tests are exceedingly tricky because of probable back-diffusion of the products through damaged kidney spaces, so that no one knows how to interpret the findings. Earlier, you might have been able to detect some difficulty in the glomerulus or some specific primary defect in the tubules. This is done clinically by determining the renal blood flow with low levels of para-amino-hippurate or diodrast, the glomerular filtration rate by inulin,

mannitol or thiosulfate extraction and by saturating the tubules with para-amino-hippurate or diodrast to see how much work they can do under the most strenuous stimulus you can give them. By comparing the findings from these objective data, one can get ideas concerning the blood flow to the glomeruli and to the tubules in the kidney and can get a pretty good impression of how the structures are working. But, in the stage of development of renal disease which this patient demonstrates, I think it would have been fruitless.

Dr. Flocks: What do you think would have happened if we had done an inulin and para-amino-hippurate clearance? What would the results have shown?

Dr. Kirkendall: I don't think you would have learned much more than you did from the urea clearance. You may have obtained some interesting results as far as the para-amino-hippurate clearance or tubular maximum excretory results were concerned. In this stage of renal failure many of these products diffuse back into the blood stream, so that you get uninterpretable results from derived data.

Dr. Flocks: What do you think about the hypertension? What has been your experience in regard to the relationship of glomerulonephritis, vascular disease and hypertension?

Dr. Kirkendall: There doesn't seem to be any good relationship between glomerular disease, hypertension or any other one disease in the kidney. You could say that in most glomerular diseases you do get hypertension, but, on the other hand, in amyloid disease of the kidney in which there is frequently a great deal of involvement of the glomeruli with amyloid material, the majority of the patients have a normal or low blood pressure. Likewise, in nephrosis there is reasonably good evidence that there is also a glomerular lesion in addition to the tubular lesion, and there, once more, hypertension is not particularly frequent unless the nephrotic syndrome is superimposed upon some other disease. Page suggests that hypertension is due in cases where it appears as a result of renal disease to a decrease in pulse pressure, and, because this pulse pressure is decreased, the flow of interstitial fluids which takes place during the pulsatile contractions of the kidneys is cut down and large amounts of renin are formed. In some instances of renal hypertension the pulse pressure may be cut down by either a block in the renal artery, by arteriolar lesions or by a film around the kidney. Goldblatt suggests that the decrease in pulse pressure is not the most important factor in the production of this type of hypertension, but that in the case of pyelonephritis it may be the result of scarring

and consequent constriction of the renal artery by the inflammatory process. This, in turn, causes the same defect that is produced by the occlusion of the renal arteries by clamps. It is difficult to say what causes renal hypertension in the majority of cases. It is probably always associated with some sort of renal ischemia, but, since we don't even know the site or formation of renin or any of the other factors involved, I think anyone who would make a statement about why this patient didn't have hypertension would be on very unfirm footing.

Dr. Wm. B. Bean (Medicine): I think that Dr. Kirkendall has covered the situation very well, and we stand on unfirm ground in our knowledge of the causes of hypertension. We do know that sometimes what appears to be glomerulonephritis may be followed by hypertension and in many instances it is not. This is a field where many experts have gone aground, and the firm footing which we would like to have does not exist.

Dr. Flocks: Dr. Eugene Boyd, pathology, got out autopsy records of about 20 cases of what was called chronic nephrosis and another 20 cases of what was called chronic nephritis, and I went over these records primarily to determine the relationship between the extent of the microscopic injury to the tubules and glomeruli and the presence or absence of hypertension. Those cases in which the lesion was almost limited to the tubules did not have hypertension, at least, as the clinical summary, and those that had vascular lesions and extensive glomerular lesions, even though the tubular lesions were not extensive, always had hypertension. It is probably true that, if hypertension is not present, the chances are that vascular disease of the kidney is not present. Now we have to know more about the blood picture in this patient, and the question arises whether it is secondary to the renal damage or whether it is an associated lesion due to whatever etiologic factors are producing the nephritis. I wonder if Dr. Hamilton will say something about this.

Dr. H. E. Hamilton (Medicine): There appear to be three hematologic problems in this case: first, the anemia, second, the bleeding tendency, and, third, the reduction of platelets. We know that this patient has uremia and furthermore that anemia is practically always found in terminal uremia. Even though anemia characteristically goes along with uremia, we might try to run down the possible causes of this anemia. I believe we can rule out the large group of blood loss anemias. The protocol states that this patient had bleeding from the gums and not elsewhere. It states also that the rectal examination

was negative, which, I assume, means that chemical tests for occult blood on the stool specimen were negative. Blood apparently was not lost through the urine. It is to be noted that the mean corpuscular hemoglobin is above normal. In a chronic blood loss anemia we would expect it to be lower than normal. The possibility that the anemia was due to an accelerated destruction of blood cells is fairly well eliminated, because we note that the bilirubin values are normal. There is a normal reticulocyte count, and the fragility of the erythrocytes as tested in hypertonic saline was normal. This leads us to another and final group of anemias, namely, those due to decreased production of erythrocytes. I expect in this case a defect will be found in the bone marrow, perhaps in the form of an aplasia of the bone marrow. We have no indication that the defect is incident to a deficiency state, such as pernicious anemia or a sprue syndrome. On the other hand, it is known that in uremia an achlorhydria frequently develops. It is possible that there might have been an interference with absorption of iron resulting in a depression of bone marrow function. Such a mechanism for the explanation of anemia and uremia has not been proved.

Now, there are other causes of bone marrow depression, and we should always think of the possibility of a leukemic infiltration of the blood. We have no indication here that the bone marrow has been displaced by leukemic cells, for it is stated that the peripheral smear was normal and furthermore that the spleen and liver were not enlarged. I think we are limited to a type of anemia in which the bone marrow has been depressed, either due to uremia or an exogenous toxin. In uremia phenol-like substances accumulate in the terminal stages of the disorder, and this type of anemia is not unlike that found in chronic phenol poisoning. It has never been possible to prove that the accumulation of metabolites or "toxins" are really responsible for the anemia of uremia. On the other hand, if an individual recovers from uremia, the anemia disappears at about the same rate that the patient recovers from this disorder. I think that it is of interest that the platelet count is low. In uremia it is possible for the platelets to be low, but ordinarily extremely low levels are not encountered. Often the platelet count is within normal limits. The low count in this case would tend to support our suspicions that there is a depression of the bone marrow substance. We cannot tell whether it is due to the uremia or an exogenous toxin.

No one knows exactly why these individuals bleed, but it is a part of the terminal picture of

this disorder. The coagulation time recorded is a little over seven minutes. This is probably slightly prolonged, but might well be in the upper limits of normal. I believe that the patient's basic blood-clotting mechanism was normal. It is to be noted that the bleeding time was considerably prolonged. A prolonged bleeding time usually means that the capillaries are unable to respond to injury by contraction. I believe that we can turn to the capillaries as a possible cause of the bleeding. Why the capillaries have developed this apparent defect no one really knows, although, as stated before, it is often associated with uremia. I don't believe that we can say the low platelet count is a cause for the bleeding, because it is known that in idiopathic thrombocytopenic purpura one cannot correlate the bleeding tendencies with the platelet count. Incidentally, the high leukocyte count is often seen in uremia, but I think we can also mention in passing that such a high leukocyte count may be seen in lead, mercury and arsenic poisoning. I believe also that uranium poisoning could give the picture that we see in this case. I do not believe that we can rule out the possibility of an exogenous toxin as the cause for the hematologic picture presented here.

Dr. Franklin: I thought the patient had little glomerular damage, mostly tubular damage, but, somehow or other, I just couldn't fit it into any clinical entity. Here was a man 33 or 34 years of age who had a chronic uremia. Did this patient have only uremia or did he have two diseases? As far as I was concerned at the time, all the symptoms could be explained as uremia. He was sick for seven months and I think we have to assume that this man had a chronic uremia. The most important thing to me, clinically, is the fact that this patient had no hypertension, no enlarged heart and perfectly normal eye ground findings. You will see why that is important. This man, therefore, was not hypertensive. A patient who dies with uremia with nephrosclerosis almost always has no hypertension and always has eye ground findings and an enlarged heart. And, if he has no hypertension at the time of examination, he had it at one time or another, as revealed by the size of the heart. So you could pretty well rule out hypertension as a cause of the uremia. There was a history from this man of a strep infection. He might have had an acute nephritis which went into a chronic state. Chronic nephritis, in a similar manner, as you'll see why later, almost invariably gives hypertension, though perhaps not as severe as the others with an enlarged heart and eye ground changes. I didn't think the man had chronic nephritis. As far as the albumin was concerned, uremia may develop

with chronic nephritis without albumin. If there is enough glomerular scarring, the albumin can't come through.

The next point discussed was pyelonephritis. Dr. Flocks has claimed that pyelonephritis, which is a tubular disease, does not give hypertension. The most marked hypertension that one can get, outside of malignant nephrosis, is associated with chronic pyelonephritis. The pathology is essentially the same. If you will read Parker and Weise's paper, which is an admirable one, you'll see that point. In that paper there were reported 39 cases of pyelonephritis that died with uremia. Only 4 did not have hypertension, and the author wasn't sure that those 4 may not have had it at some other time. Either the changes in pyelonephritis start in the urine somewhere and creep up to the ureter, or they are hematologic in origin. The interstitial tissue tubules are affected, and there is the same damage in the vessels as in the path of the infection, exactly as one gets in malignant nephrosclerosis. They may give you the highest hypertension that you can get. Only 1 case out of 9 will not have hypertension. You may have glomerular damage in which you have an occlusive nature of the glomeruli, and that's what happens in chronic nephritis and in hypertension. And, when you cut off the blood supply, you do get ischemia, but you can also get a glomerular damage which does not affect the blood supply. And the cases mentioned here were exactly of that type. So, we come to the acute nephritides. In acute nephritides we have a possibility that this patient may have had, let us say, toxic nephrosis at one time or a lower nephron nephrosis which became chronic. With a toxic nephrosis, such as one has in mercury and in acute nephritides, the patient may die in uremia without any hypertension, because there you will almost invariably find little glomerular damage. The damage is in the tubules. But the acute toxic nephrosis, such as mercury, has a characteristic course and does not become chronic, with the patient usually dying within 10 to 14 days. They either die or make it, and if they make it, the tubules usually regenerate very nicely. So, I couldn't see this as a chronic lower nephron nephrosis, although I did know that he had no glomerular damage, or only a little, and that he had tubular damage.

Dr. Flocks: I have one advantage over Dr. Franklin, and that is I have the last word. As far as pyelonephritis is concerned, there is no question that he is right. There are patients who have a far advanced chronic pyelonephritis in which the lesion finally produces a vascular lesion and hypertension occurs. On the other hand, we

see hundreds of cases of chronic pyelonephritis that do not have hypertension. Hypertension is not at all characteristic of patients dying with uremia. Now, with regard to the patient under discussion, we, as clinicians, will pretty well agree that the primary lesion here was the renal lesion, that the blood changes were secondary to the renal lesion, that the renal lesion was primarily of the interstitial tissues and the tubules and chronic in nature. We did not know what the etiology was. There was no history of any exogenous poison or toxin; there was nothing particular about the sore throat, or so forth, that might have brought this thing on. We did not understand why the patient had such a lesion. It was felt that the cause of death was the renal insufficiency due to this lesion.

Necropsy Diagnoses

The significant pathologic findings were in the kidneys, lungs, bone marrow and testes. The right kidney weighed 160 gm., the left 230 gm. The cortical surfaces were finely scarred, and the



Fig. 1. Kidney, low power.

organs were pale. The pelvic mucosa of the right kidney was hemorrhagic. There was no evidence of infection, and there was no pelvic or ureteral obstruction. The conspicuous feature on microscopic examination was the marked interstitial fibrosis. The fibrosis had resulted in severe pressure atrophy of the entire tubular system. There was a striking decrease in the number of discernible tubules. A few scattered foci of lymphocytes were observed in the dense fibrous tissue. A few glomeruli were atrophic, and a rare glomerulus was hyalinized, but the vast majority were virtually normal and did not show changes of glomerulonephritis. Arteries and arterioles were virtually normal. No amyloid was discernible.

There was a severe lobar-type necrotizing pneumonia of the lower lobe of the right lung, and a necrotizing lobular-type pneumonia of the remaining lobes of both lungs. Cultures revealed *Aerobacter aerogenes* only.

The bone marrow showed serous atrophy of

the adipose tissue, with hypoplasia of myeloid, erythroid and megakaryocytic elements. There was moderate reticuloendothelial hyperplasia of the lymph nodes.

No spermatogenesis was observed in the testes. There was a moderated hemorrhagic cystitis of the urinary bladder. The pancreas showed changes consistent with uremia.

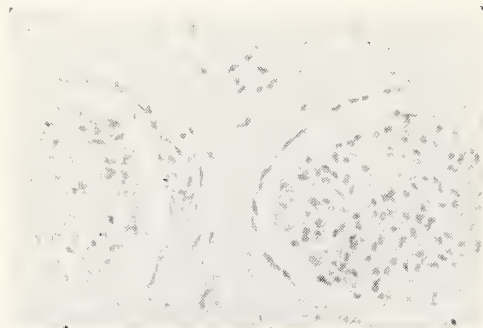


Fig. 2. Kidney, high power.

The exact etiology in this case is obscure. The kidney changes are not those of the usual types of glomerulonephritis or pyelonephritis. The interstitial fibrosis of the kidneys, hypoplasia of bone marrow and aspermatogenesis strongly suggest some type of toxic agent rather than an inflammatory one. The excellent correlation of clinical and pathologic findings, especially with regard to the kidneys, is noteworthy.

The cause of death was uremia complicated by widespread necrotizing pneumonia.

Necropsy diagnoses:

Chronic interstitial fibrosis of kidneys with severe tubular atrophy.

Uremia.

Necrotizing lobular pneumonia, bilateral.

Hypoplasia of bone marrow.

Aspermatogenesis.

Hemorrhagic cystitis.

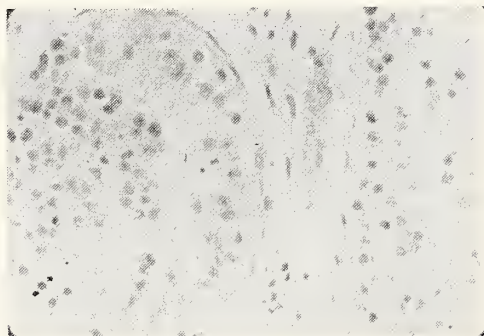


Fig. 3. Testis.

Dr. Carter (Pathology): The significant pathologic findings were in the kidney, lungs, bone marrow and testes. There was severe damage to the kidneys in the form of marked tubular

atrophy and degeneration of a chronic type. The most striking finding was a chronic interstitial fibrosis. The glomeruli were perfectly normal. Where are we going to try to pigeon-hole this lesion? One cannot call it chronic glomerulonephritis, since the glomeruli were normal. It's not lower nephron nephrosis, although, clinically, the manifestations are suggestive. One might think of this as a type of pyelonephritis, but it is a rather unique type of pyelonephritis and one which, in our experience, we have not encountered very frequently, if at all. The extreme degree of fibrosis with little chronic inflammatory change is not what is usually seen in the majority of cases of chronic pyelonephritis. I would like to pose this one possibility, however; first of all we might ask, could the uremia account for both the severe hypoplasia of the bone marrow and the aspermatogenesis? Regarding the bone marrow, one cannot be too dogmatic. In the majority of uremic cases, in patients of this age or any age, and in uremia as long-standing and severe as this one, one rarely finds at autopsy, no matter how many sections of bone marrow he takes, this degree of hypoplasia. Hypoplasia can occur but rarely to this degree. As a matter of fact, many times the bone marrow is perfectly normal and at

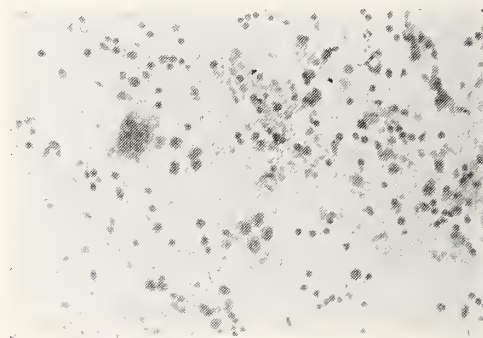


Fig. 4. Bone Marrow.

times hyperplastic. I could find nothing in the literature referable to uremia and aspermatogenesis. In going over some cases of uremia of this same age group, I found virtually normal spermatogenesis. There is a more plausible explanation for the lesions, that being the possibility of some exogenous toxic substance. Benzene poisoning can produce aspermatogenesis and the type of change that we have in the bone marrow. Whether benzene poisoning can produce these changes in the kidneys I frankly don't know. We may conclude by calling this a chronic interstitial fibrosis of the kidneys, with severe tubular atrophy. We cannot be dogmatic, except to say that it is not lower nephron nephrosis nor glomerulonephritis in the ordinary sense. The

(Continue on page 534)

STATE DEPARTMENT OF HEALTH

Walter Biering

BIOLOGICS AND DRUGS AVAILABLE

The various divisions of the State Department of Health have different drugs and biologics available for use as part of their programs. The following is a summary of these materials available as of Sept. 24, 1949:

Serum-Plasma Center and State Laboratories

Except for brucellin (see below) these biologics are distributed from the Serum-Plasma Center, Division of Preventable Diseases, Iowa State Department of Health, Des Moines:

Measles convalescent serum.....	5cc.	\$1.00
	10cc.	2.00
Measles globulin (gamma globulin or immune serum globulin)	2cc. (no charge)	
<i>No charge is made since this material is a Red Cross product.</i>		
Mumps convalescent serum.....	10cc.	2.00
	20cc.	4.00
Scarlet fever convalescent serum.....	10cc.	2.00
	20cc.	4.00
Hyperimmune pertussis serum.....	10cc.	2.00
	20cc.	4.00
Tuberculin (O.T.) skin-testing material.....	0.5%	
	1.0% (no charge)	

This material is made up monthly and mailed to schools, colleges and physicians who have indicated they want a certain amount each month.

Brucellin 5cc. (no charge)

This material is produced and distributed by the State Hygienic Laboratories, Medical Laboratories Bldg., Iowa City, Iowa.

Division of Dental Hygiene

Penicillin for use in Vincent's therapy (chewing troches)—package of 6 troches (20,000 units each) crystallin penicillin G	Squibb & Sons
Howe's ammoniacal silver nitrate for use in preventive dentistry—package of 12 ampules, 0.5 size.....	Squibb & Sons
2% aqueous solution of sodium fluoride for caries control—8 oz. bottles prepared at State Laboratories.....	State Laboratories
4.73 gm. sodium fluoride powder C. P. individual packages	Surgical Supply

Requests for the sodium fluoride preparations may be addressed either to the Division of Dental Hygiene, State Department of Health, Des Moines, or to the State Hygienic Laboratories, Medical Laboratories Building, Iowa City. There are no charges for these drugs.

Division of Maternal and Child Health and Division of Preventable Diseases

Silver nitrate wax ampules, 1%; boxes of 12 or 100 (no charge). Abbott Laboratories.	
Diphtheria antitoxin; 1,000 unit.	Squibb & Sons.
Diphtheria antitoxin; 5,000 unit.	Squibb & Sons.
Diphtheria antitoxin; 10,000 unit.	Squibb & Sons.
Diphtheria antitoxin; 20,000 unit.	Squibb & Sons.
Schick test toxin; 10 test and 100 test.	Squibb & Sons.
Diphtheria toxoid-antitoxin Ramon; 30cc. (10 complete immunizations).	Squibb & Sons.
Diphtheria-pertussis combined; 8cc. (2 complete immunizations).	Squibb & Sons.

Tetanus toxoid; 10cc. (5 complete immunizations).	Squibb & Sons.
Diphtheria-tetanus combined; 10cc. (5 complete immunizations).	Squibb & Sons.
Pertussis vaccine; 20cc. (4 complete immunizations).	Squibb & Sons.
Dick test toxin; 5 test.	Squibb & Sons.
Typhoid vaccine; 20cc.	Squibb & Sons.
Rabies vaccine (killed ultra-violet irradiated; 2-7 dose packages constitute one full treatment).	Squibb & Sons.
Diphtheria toxoid alum precipitated; 10cc. (5 complete immunizations).	Wyeth, Inc., Products.
Diphtheria-tetanus-pertussis, combined; 10cc. (5 complete immunizations).	Wyeth, Inc., Products.
Smallpox vaccine; 10 points (10 vaccinations).	Wyeth, Inc., Products.

All immunization orders are filled on orders from the Division of Maternal and Child Health for approved projects, as for school and pre-school immunization programs. All orders not for approved projects are charged for at list price, less 30 per cent.

Charges are made for all rabies treatments unless the patient is unable to pay and the physician so certifies.

All typhoid vaccine is furnished without charge.

Typhus and Rocky Mountain spotted fever vaccines are no longer stocked because of the infrequent requests for them; nor is yellow fever vaccine stocked here, because yellow fever immunizations must be given at the port of embarkation or at a Marine hospital.

Division of Venereal Disease Control

Aldarsone	1.0 gm.	Abbott Laboratories
Bismarsen with solvent...	2.0 gm.	Abbott Laboratories
Clorarsen	0.067 gm.	Squibb & Sons
Distilled water	10cc.	Squibb & Sons
Distilled water	10cc.	Upjohn Company
Mapharsen	0.0610A	Parke Davis
Neocarsphenamine	0.6010A	Squibb & Sons
Stabisol	30cc.	Squibb & Sons
Stabisol	500cc.	Squibb & Sons
Sulfathiazole	0.5 gm.	Squibb & Sons
Tryparsamide	3.0 gm.	Squibb & Sons
Penicillin	100,000 units	Squibb & Sons
Penicillin	100,000 units	Schenley
Monocillin	10cc.	Schenley
Duracillin	10cc.	Eli Lilly Co.
Duracillin	1cc.	Eli Lilly Co.
Crystacillin	10cc.	Squibb & Sons
Crystacillin	1cc.	Squibb & Sons

These drugs and biologic preparations are regularly distributed from the Division of Venereal Disease Control, State Department of Health, Des Moines, to venereal disease clinics. They are also available without charge to physicians who, in reporting cases of venereal disease, may request any of them in the treatment of the cases reported.

**Services of
State Hygienic Laboratory
Iowa City, Iowa**

The following is a list of services available as of Sept. 1, 1949.

1. Agglutination Tests:
 - Brucellosis.
 - Typhoid fever.
 - Paratyphoid fever or salmonellosis.
 - Tularemia.
 - Rocky Mountain spotted fever—typhus group.
2. Blood Cultures:
 - Brucellosis.
 - Typhoid-Salmonella group.
 - Miscellaneous (fee commensurate with the work involved).
3. Cultures:
 - Spinal fluid—meningitis.
 - Feces — typhoid, dysentery — Salmonella group.
 - Streptococcus sore throat—swabs.
 - Diphtheria—swabs.
 - Sputum—pneumonia—tuberculosis—L. acidophilic counts.
 - Food poisoning.
4. Smears:
 - Sputum—tuberculosis.
 - Vincent's.
 - Gonorrhea.
5. Parasitic Diseases:
 - Blood—thick and thin films for malaria and other blood parasites.
 - Stools.
 - Urine.
 - Sputum.
 - Tissue—Trichinella.
6. Rabies:
 - Brain smears.
 - Mouse inoculation.
7. Guinea Pig Inoculation Tests:
 - Tuberculous material (\$5.00 fee).
 - Virulence test for diphtheria.
8. Serologic and Allied Tests:
 - Syphilis—blood and spinal fluid.
 - Kahn standard—qualitative and quantitative.
 - Kline standard—qualitative and quantitative.
 - Kolmer complement fixation tests—qualitative and quantitative.
 - Colloidal gold (\$1.00 fee).
 - Infectious mononucleosis—heterophil agglutination.
 - Gonorrhea—complement fixation (\$1.00 fee).

9. Complement Fixation Tests:

Rocky Mountain spotted fever.
 "Q" fever.
 Rickettsialpox.
 Encephalomyelitis.
 Western equine.
 St. Louis.
 Typhus fever.
 Murine.
 Epidemic.
 Lymphogranuloma venereum.

10. Water Analyses:

Private water supplies (\$1.00 fee). Fee exceptions are:

- (a) Water supply owned by nonprofit organizations.
- (b) Specimen collected by health officer or representative of State Department of Health in checking sources of illness or health hazards.

11. Containers Distributed:

Diphtheria.
 Agglutination test.
 Serologic tests for syphilis.
 Tuberculosis, sputum.
 Slide containers for G.C. smears, Vincent's and malaria.
 Special—for immediate use only:

- Blood culture.
- Feces—typhoid.
- Feces—parasitic.

MORBIDITY REPORT

Diseases	Sept. '49	Aug. '49	Sept. '48	Most Cases Reported From:
Diphtheria	1	1	4	Floyd
Scarlet Fever	14	2	25	Linn, Polk, Woodbury
Typhoid Fever	1*	0	0	Pottawattamie
Smallpox	0	0	0	.....
Measles	19	31	8	Black Hawk, Polk
Whooping Cough...	9	14	26	Scattered
Brucellosis	35	28	43	Cedar, Jasper
Chickenpox	19	4	10	Des Moines, Story, Woodbury
German Measles ...	0	3	1	.....
Influenza	0	0	0	.....
Meningitis meng...	1	0	1	Cerro Gordo
Mumps	27	98	44	Delaware, Floyd, Worth
Pneumonia	4	2	1	Allamakee, Black Hawk, Polk
Poliomyelitis	267	410	329	Dubuque, Linn, Polk
Rabies in Animals..	19	11	—	Polk (7), Boone, Carroll, Pottawattamie, Wright (each 2), others scattered 1 in a county
Tuberculosis	98	53	67	For the State
Gonorrhea	50	59	111	For the State
Syphilis	181	183	123	For the State

* (Paratyphoid)

The JOURNAL of the Iowa State Medical Society

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F.B.I. Investigation of A.M.A. and Other Medical Societies

Early in October the American Medical Association revealed that the Federal Bureau of Investigation, under the direction of the Antitrust Division of the Justice Department, had launched an investigation of the American Medical Association and fifteen other medical groups because of alleged antitrust complaints. Since then six other medical groups have been notified they, too, will be investigated.

The Justice Department, in commenting on the matter, said many physicians and other people had complained about medical monopolies, but it does seem strange to the rank and file of the medical profession that these investigations should be launched just at a time when the physicians of the country are making a strong stand against nationalization of medical service. It might seem to the more cynical that the whole affair smacks of a police state in which the government attempts to attain its ends through intimidation. Certainly it is not coincidence that all of these medical groups have been brought under investigation in a period of a few weeks, and that the investigations are concurrent with the Administration's drive for a compulsory health program.

The implications of this move by the Justice Department will affect every citizen of this country. The principles involved are those of whether the freedom of the individual is to be preserved or whether the state is all powerful. The United States was founded by a people fleeing the oppression of government in other lands; it was built upon the foundation of a belief in the in-

tegrity and worth of the individual. Freedom of speech, freedom of worship, freedom of thought, freedom of education—all of these are inherent in our way of life. We are the last nation in the world where the people possess such freedom. It is ironic that while one branch of our government endeavors to restore freedom to the peoples of the world through the United Nations, another branch seemingly resorts to police state methods in its desire to achieve a welfare state.

Make no mistake about it—this is a serious matter. The investigations will undoubtedly show that there have been no restraint of trade, no monopolistic tactics employed, by any of the societies involved. This does not mean, however, that their names will be cleared with the public by a pronouncement of findings by the F.B.I. To the best of our knowledge there is no procedure by which the Justice Department can be asked or compelled to admit that the accusations proved to be false. The smear remains, as does the objective behind creating the smear.

Brookings Health Survey

In September Brookings Institute launched a comprehensive survey that will attempt to explore and evaluate all sources of medical and hospital care such as governmental, voluntary, commercial, organized labor, philanthropic, industrial, etc. The study's scope is planned so broad as to make it incomparable to anything that has ever been done before. Its purpose is as stated in the prospectus, "If we are to have a sound national health program, the first requirement is to ascertain the facts as to the state of medical service in the United States today." The Brookings Institute in 1948 published "The Issue of Compulsory Health Insurance," which strongly opposed the adoption of a nationalized system.

It is estimated that the study will require two years' effort on the part of a full time staff of eight persons, plus the participation of specialists in various fields who will be called in as consultants. Of course, it will also entail the cooperation of the national professional societies, labor organizations, insurance companies, governmental agencies, industrial health programs, farm groups and many other groups concerned with one phase or another of the subject.

Present plans call for publication of findings in two volumes. "The first part of the study would be a comprehensive, descriptive and statistical report designed to make available data on the extent of medical care and the existing and potential provisions for meeting the cost through insurance or prepayment plans, and in the case of those who cannot pay, through public services

or private philanthropy. The second volume, based upon the facts assembled in Volume I, would be an evaluation of the numerous plans now in operation and those proposed. It would deal with the issues of public and private policy and indicate the means by which adequate medical care can best be provided."

Utilization of the facts and analyses developed by the survey would be boundless. The potential ranges from achievement of a finer definition of "adequate medical care" to curricular reforms in medical, dental and nursing education. A successful study of this kind could stimulate a redistribution of medical manpower, result in major changes in policy relating to the health care of servicemen's dependents and eventuate in almost any number of innovations. With the F.B.I. carrying out an investigation at A.M.A. headquarters for vague reasons, it is well that such a study be undertaken upon our own initiative.

Cardiovascular Investigation

A large scale, nationwide attack on heart disease was launched in September when a total of \$8,614,737 in federal funds was awarded to 85 medical schools and research institutions in 34 states and the District of Columbia, according to announcement by the federal security administrator. Administered by the National Heart Institute of the Public Health Service, the funds will be used for stepped-up heart research, for expanded programs of heart teaching in medical schools, and for building additional heart research laboratories throughout the country.

The \$14,000 grant to be received by the College of Medicine of the University of Iowa was given to promote training in cardiovascular disease. The department of internal medicine plans to use the grant in helping to establish and develop the cardiovascular research laboratory, which will be used for diagnosis and treatment of congenital and other types of heart disease. This is to be under the direction of Dr. James Culbertson, who is at present in Iowa City getting a laboratory laid out, installing and purchasing equipment, and planning the schedule for teaching and investigation.

For practical purposes it is impossible to draw a definitive line between what might be called the strictly teaching functions of such a laboratory and that which is more properly directed at diagnosis and later therapy, especially in congenital heart disease. Similarly, one cannot draw a sharp line of distinction between the diagnostic and therapeutic function of such a laboratory, since in order to use the newer methods of surgical treatment it is frequently necessary to have ac-

cess to many different diagnostic procedures, including standard x-ray and fluoroscopy, the use of radiopaque dyes injected into the blood stream to outline the vessels and the chambers of the heart, and the employment of a cardiac catheter to measure the oxygen saturation and pressure in different chambers of the heart which are available to the catheter. Such studies are carried out now in the manner approaching the routine only because there has been a tremendous amount of investigation. It is possible with this newer method to explore a number of fields in physiology and pathology which up to now have not been accessible to direct approach.

The entire program has been made possible by a gift from the affiliated Iowa Heart Association and Iowa Tuberculosis and Health Association, which have collaborated in sponsoring this particular endeavor. There will be additional connections with other U. S. Public Health grants, which will be under the jurisdiction of Dr. Bierring, the state health commissioner at Des Moines.

From the practical point of view, the teaching of cardiovascular disease will be carried out mostly on a graduate level with residents on the medical service and perhaps surgery and some of the other specialties. Residents in pediatrics and x-ray will have an opportunity to rotate through the cardiovascular laboratories, and some will wish to take time out for a fellowship to study particular problems in this field. Instruction at the undergraduate level will be chiefly that which comes as a by-product of the over-all system in the case of particular patients who are studied by the undergraduate students as part of the routine ward teaching.

A Program for Training General Practitioners

Today, when there is such a cry for more general practitioners as opposed to specialists, it is interesting to see what one hospital in Iowa has evolved as a training program for interns and residents to fit them for general practice. St. Luke's Hospital in Cedar Rapids made an analysis of patients discharged in 1948, finding that 69 general practitioners had an average of from one to 100 patients a month, and 10 had over 100 patients a month. In comparing the average monthly patient load for all general practitioners with that of the specialists, it was found that general practitioners had 303, whereas specialists had 398.

A further analysis of the patients of the 10 general practitioners having more than 100 hospitalized patients per month showed that in the year these 10 doctors had 904 medical cases, 348 surgical, 564 obstetric and 167 pediatric, for a

total of 1,983. The committee charged with outlining the training program felt that the wide range of medical care offered by these 10 men presented a valuable training course for both interns and residents and so solicited their help.

A rotation system for interns was broken up into the following categories: number 1, medicine, four months; rotation number 2, surgery, four months; rotation number 3, pediatrics, two months; and rotation number 4, obstetrics, two months. In the medical rotation the intern sees 60 cases per month with the general practitioner and 55 cases with specialists. In the surgical rotation he sees 40 cases per month with the general practitioner and 156 cases with the specialists. In pediatrics he sees 39 cases per month with the general man and 33 with the specialists; and in obstetrics he sees 10 with the general man and 42 with the specialists.

In setting up the general practice residency, consideration was given to the types of cases being served by general practitioners and the following rotation was designated. Rotation number 1 (a two month service) contemplates that the resident will see 56 patients per month, of whom 23 will be medical, 12 surgical, 17 obstetric and 4 pediatric. During rotation number 2 (two months) he will see 55 patients per month, 21 being medical, 8 surgical, 19 obstetric and 6 pediatric. In rotation number 3 (two months) he will see 55 patients a month, 31 medical, 9 surgical, 11 obstetric and 4 pediatric. Rotation number 4 (two months) will give him 209 patients in the emergency room, 78 patients per month in health services, and 29 orthopedic patients. In rotation number 5 (two months) he will see 33 patients per month with pediatric specialists and will also spend half his time with the pediatrician in his office, receiving training in office pediatrics. Rotation number 6, the final two months, he will see 83 patients per month, these being eye, ear, nose and throat and urology cases, and he will also spend half his time with specialists in learning office eye, ear, nose and throat and urology practice. In other words, for the last four months he will spend about half his time in the hospital and the other half learning how these particular fields of medicine are handled in the office.

It is felt that a training program of this type will give the intern and resident thorough ground-work in the medical conditions which he is apt to encounter in a general practice. It will enable him to work with both general men and specialists, in the hospital and office, so that upon completion of the residency training he will feel confident of being able to carry on by himself in the community he chooses.

Lacerated Wounds of the Hand

Lacerations may damage skin, fat, fascia, muscles, tendons, tendon sheaths, blood vessels, nerves and, more rarely, joint or bone. The Committee on Trauma of the American College of Surgeons recommends that treatment of such lacerations be directed toward protection from infection, restoration of structures, avoidance of deformity and early restoration of function. In line with this, the best first aid management consists in the application of a sterile protective dressing, a firm compression bandage and immobilization by splinting in the position of function. No attempt should be made to examine, cleanse or treat the wound until operating facilities are available.

Definitive care should be undertaken only under proper conditions, which include a well equipped operating room, good lighting, adequate instruments, sufficient assistance, complete anesthesia and a bloodless field. The injury should be evaluated with respect to its cause, time of occurrence, infection status, nature of first aid treatment and appraisal of structural damage. The hand should be examined to determine the location and extent of the wound, the source of major bleeding, the presence of foreign material, function of tendons and intrinsic muscles, the condition of both sensory and motor functions of the nerves and the integrity of bone and joint.

Following anesthetization of the patient and application of hemostatic blood pressure cuff (not to be inflated above 300 mm.), the wound should be thoroughly cleansed, and all foreign material removed and devitalized tissue excised. Divided blood vessels should be secured and ligated.

Those wounds which are relatively clean and not more than three or four hours old, and which are not grossly contaminated by highly infective material, or in which infection has not become established, are suitable for repair of the damaged structures. Those not fulfilling this criteria are better left unrepaired to await secondary closure and later reconstructive surgery. They should, nevertheless, be as carefully cleansed as are those prepared for primary closure, and in such cases nerve ends may be identified with nonabsorbable suture or lightly united.

All severed nerves should be repaired, including the digital nerves, by the use of arterial silk on fine needles, accurately approximating the nerve ends by small interrupted sutures placed around the periphery. These sutures should include only the perineurium, not the nerve bundles. It is important to avoid axial rotation, particularly in nerves having both motor and sensory function. Nerves and tendons should be handled gently, never crushed, rubbed or allowed to become dry.

All severed tendons should be repaired, including the tendons of intrinsic muscles, except for flexor tendons severed within the flexor sheath or in the digital flexor canal. Primary suturing of the flexor profundus in this location rarely succeeds in restoring useful function, even if the flexor sublimis is removed. Suturing both flexor sublimis and profundus in this area almost invariably results in failure. Should even minor infection occur, failure is assured. With rare exceptions, it is sound practice to repair the skin and digital nerves only, leaving the flexor tendons for secondary reconstruction when severed in this region. Nonabsorbable sutures of silk or wire are used to accurately approximate the severed tendon ends after they have been cleanly squared off with a sharp knife. Additional incision to secure retracted tendon ends should follow flexion creases. They should be curved or transverse, never longitudinal, and never in the palmar or dorsal midline of a finger.

Severed muscle which is alive, contractile and vascular, and in which all devitalized shreds have been trimmed away, should be lightly approximated with interrupted mattress sutures, avoiding tension and constriction.

Following these procedures, the hemostatic blood pressure cuff is released to permit identification, control and ligation of bleeding vessels. The field should be dry before closure of the wound. Severed fascial and ligamentous tissue should be repaired with interrupted mattress sutures, avoiding tension. Subcutaneous tissue may be lightly approximated with interrupted fine sutures. The skin should be closed with fine, nonabsorbable sutures.

A firm pressure dressing is applied, the fingers being separated with gauze between them. The hand is then immobilized by splinting in the position of function, except when suture of severed tendons requires splinting in a position to insure the least strain on their suture lines. If nerves have been severed, the position of function is particularly important to prevent deformity due to contracture of active muscles when their opponents are denervated and paralyzed. The extremity is kept elevated for the first three or four days, and dressings are usually not removed for one week unless infection develops. The healing of severed tendons and nerves requires three weeks of uninterrupted immobilization.

Antibiotics and tetanus antitoxin are administered systemically as prophylaxis against infection. After healing, restoration of function is best secured by directed voluntary exercise and appropriate occupational therapy.

Medical-Press-Radio Conference

The Committee on Medical Service and Public Relations of the Iowa State Medical Society conducted its first Medical-Press-Radio Conference in Des Moines, Friday, September 23, at Hotel Savery. The session began at about 10:00 a. m. and was adjourned at 4:00 p. m. One doctor from each county, who was appointed by his county medical society, was asked to attend the meeting and to extend an invitation to a newspaper editor and a radio station manager in his county. All physicians were welcome, and every newspaper and radio station was invited to send a representative or representatives to the conference.

Dr. Wayland K. Hicks, of Sioux City, chairman of the Coordinating Educational Committee of the Iowa State Medical Society, presided. Dr. Nathaniel G. Alcock, of Iowa City, president of the Iowa State Medical Society, delivered the address of welcome. The chairman of the committee responsible for the meeting, Dr. Fred Sternagel, of West Des Moines, discussed the purpose of the meeting.

The first guest speaker, Mr. Kenneth MacDonald, of Des Moines, executive editor, *Register and Tribune*, gave the views of a city newspaper. Mr. MacDonald stated that the only thing we ask of the medical profession in the way of better cooperation "is that they make a definite attempt to give our reporters adequate information so they will be able to report to the public promptly and accurately on cases that are of public interest." He continued by saying, "The people in press and radio are no more anxious to divulge information detrimental to a patient or the public than the medical profession is to release it." It is the responsibility of a newspaper to publish news that is in the best community interest, and, since its purpose is to serve the public, it must give consideration to its readers and not be influenced by any particular group or individual. He asked for better cooperation from doctors and hospitals in providing information on legitimate news stories and on picture arrangements. Mr. MacDonald believes the doctors should simplify the language they use in visiting with representatives of the press and radio. He also said that the newspapers are making every effort to employ people of a calibre that qualifies them to report on medical subjects. The editor continued by saying, "The contrast between the language of science and lay language has made it difficult to report to the people in the best newspaper form. When this gap is closed, I feel that a great deal will have been accomplished in improving medical-press-radio relations."

Mr. F. C. Grawe, of Waverly, editor of the *Waverly Democrat* and *Bremer County Independent*, spoke next as a rural newspaper editor. In discussing compulsory health insurance he voiced the opinion that 60 to 65 per cent of the public would vote in favor of some type of compulsory insurance. At this point, Ben Sanders, a Spencer radio executive, said that a poll conducted on this subject in Spencer showed only 3 out of 209 as favorable. Mr. Grawe indicated that the press and medical relations in his area are good, but that press and medical people should get together more often in order to have a better understanding of mutual problems.

Mr. Edward Breen, president of radio stations KVFD-KFMY, Fort Dodge, described incidents illustrating the need of better medical-press-radio relations and offered suggestions for improvement. He believes the physicians in a town should make it a point to visit the local radio station manager and newspaper editor and voice their opinions concerning pending legislation and community problems. Mr. Breen related the experience he had in conducting a radio series entitled "Your Doctor Speaks Against Government Medicine" in cooperation with the local county medical society. In his opinion the series was a success but only because of the excellent cooperation with the local county medical society. Mr. Breen's station donated thirteen quarter-hour periods of public service time to the medical group.

Dr. Donald C. Conzett, of Dubuque, program chairman of the conference, gave a summation of the discussions and adjourned the morning session.

After a luncheon sponsored by the Iowa State Medical Society, Mrs. Molly Samore, of Sioux City, formerly of Cardiff, England, delivered an informative address on "Socialized Medicine from a Britisher's Point of View." Mrs. Samore is the war bride of Mr. Edward F. Samore, a Sioux City lawyer. She feels her country is sinking, and that it is not only bad for England but for the whole world. In socialistic Britain she said, "Some provisions have been made for you from the time of your birth until you reach the grave. There are government benefits all along the line. They are called free. What a wonderful word, free. But how disillusioning, because it isn't free. It is being paid for. But everyone seems to think the other fellow is the one doing the paying. Only a fool could think they are getting something for nothing."

The British war bride said, "Socialized medicine in Great Britain means compulsory health insurance administered by the government, and every Britisher will have to pay for it in three

ways: (1) by contributing directly out of his wages, (2) by paying high local taxes, and (3) by paying tremendous taxes generally. Contributions are compulsory, and everyone has to contribute whether they want to or not, so that everyone may enjoy the benefits."

Mrs. Samore then explained the health scheme's operation. In her opinion the plan is gigantic and costly—"In the light of Britain's financial crisis, perhaps too costly; yet, if it raises the standard of living and health, it is worthy of support and imitation. But what sort of standard of living is being built when children, whose ancestors valued independence, are being encouraged in the attitude of 'give me, give me. It's all right, you don't have to pay for it.' What does that do to a person's soul? And is the standard of health any better when medical care resembles an assembly line? The idealistic aims of the National Health Service can only be realized if Britain's export trade increases and if her workers heighten their productive output and thus ensure Britain's economic recovery and prosperity." She closed by stating, "If this does not take place, then the beautiful vision of 'social security for all from the cradle to the grave,' as embodied in the scheme, may well become a nightmare."

Mr. William Alan Richardson, of Rutherford, New Jersey, editor, *Medical Economics*, was the opening speaker of the afternoon session. He spoke on the "First Year of the British National Health Service." His talk was much the same as Mrs. Samore's, although he did make some additional points that were significant. Mr. Richardson said, "The primary allegiance of the British doctor is to the state, not the patient, and the British system is popular with many less skilled doctors and interns, because they receive more pay and because it is no longer necessary to buy a practice."

The plans of the State University were outlined by Dr. Robert T. Tidrick, chairman, Dean's Committee. Dr. J. Stuart McQuiston, of Cedar Rapids, described the general practice residency established for interns by St. Luke's Hospital in Cedar Rapids. He said the system was designed to equip an intern more fully for entrance into general practice. Under the program, interns accompany practicing physicians on home calls. Dr. McQuiston was the last discussant on the agenda. A brief open discussion preceded the close of the meeting.

Approximately one hundred physicians and an equal number of newspaper and radio people attended Iowa's first Medical-Press-Radio Conference.

State University of Iowa
COLLEGE OF MEDICINE
CONFERENCE IN OBSTETRICS-GYNECOLOGY

November 14, 15, 16, 17 18, 1949

Department Staff

Dr. E. D. Plass
Professor and Head of Department of
Obstetrics and Gynecology

Dr. J. H. Randall
Professor

Dr. William C. Keettel
Associate Professor

Assisted by

Dr. R. L. Jackson
Department of Pediatrics

Guest Speakers

Dr. William J. Dieckmann, Mary C. Ryerson Professor and Chairman of Obstetrics and Gynecology, Chicago Lying-in Hospital, University of Chicago Medical School, Chicago, Illinois.

Dr. John Huffman, Assistant Professor of Obstetrics and Gynecology, Northwestern Medical School, Chicago, Illinois.

Dr. Laman Gray, Associate Professor of Obstetrics and Gynecology, Louisville Medical School, Louisville, Kentucky.

Dr. Ralph Campbell, Professor of Obstetrics and Gynecology, University of Wisconsin Medical School, Madison, Wisconsin.

Dr. Curtis J. Lund, Professor and Head of Obstetrics and Gynecology, Charity Hospital, Louisiana State University Medical School, New Orleans, Louisiana.

Attendance is limited to 30, and applications will be accepted in the order they are received when accompanied by the fee of \$40. Checks should be made payable to the State University of Iowa and mailed with your application to the Director of Medical Post-Graduate Studies, Room 259, Medical Laboratory Building.

Lunch can be obtained at the Doctors' Dining Room at 12:30. Tickets can be purchased at the hospital cashiers' window in the main entrance to the hospital.

**THE IOWA SOCIETY OF MEDICAL
TECHNOLOGISTS**

will hold its
Semi-Annual Meeting
at the Hotel Savery
Saturday, November 19, 1949
10:00 a.m. to 4:30 p.m.

A worthwhile scientific program has been planned.

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Tuesdays at 11:45 a.m.

WOI—Thursdays at 11:15 a.m.

- Nov. 1- 3 "Menopause"
F. R. McFadden, M.D., Davenport
- Nov. 8-10 "Functions of the School Nurse"
Iowa State Nurses Association
- Nov. 15-17 "Diseases of the Thyroid"
F. W. Preston, M.D., Mason City
- Nov. 22-24 "Appendicitis"
R. A. Cramer, M.D., Cedar Falls
- Nov. 29-Dec. 1 "The Common Cold"
John Broman, M.D., Maquoketa

CLINICOPATHOLOGIC CONFERENCE

(Continued from page 526)

uremia contributed to, if it did not account for, the immediate death. The necrotizing lobular and lobar types of pneumonia certainly contributed to the death of this patient. The hemorrhagic cystitis and the lymphoid hyperplasia were purely incidental findings that can be seen in any condition in which there is some degree of infection.

Dr. Kirkendall: First, I don't think Dr. Franklin wants you to have the impression that renal hypertension is always associated with glomerular lesions. We know that constriction of either a renal artery or both renal arteries will give hypertension in experimental animals. This does not cause glomerular lesions, and there are many other discrepancies that haven't been explained as yet concerning the glomeruli and renal hypertension. The other thing is, I would like to broach the possibility that this might be due to an uranium salt poisoning. It has been seen in animals that this sort of fibrosis can take place in the kidney, and it might also have some effect, as this disease did, on the man's testes and bone marrow.

NEWS NOTES

from the

Committee on Medical Service and Public Relations

Eighth District Meeting

Dr. C. A. Boice, eighth district councilor, of Washington, held a meeting of the physicians in his district at the Burlington Hotel, Tuesday evening, September 13. Dr. Forest H. Coulson, president of the Des Moines County Medical Society, delivered the address of welcome. He introduced Dr. Frank G. Ober, of Burlington, who is chairman of the public relations committee and who was responsible, in part, for arranging the meeting. Dr. C. A. Boice then introduced the guest speaker, Dr. Walter Stevenson, president of the Illinois State Medical Society, who discussed general problems confronting the medical profession. He believes steps should be taken to encourage the younger men now entering the practice of medicine to become more active in county, state and national medical organizations. He made his point by indicating the few young men present at the district meeting. "The problems that are now confronting the practice of medicine should be just as much the concern of the young men as they are of the men who have been serving the people for 25 to 50 years," he said.

Dr. Stevenson thinks it should be made plain to the people that medicine is not opposing compulsory health insurance for selfish reasons, but is fighting it because the proposed system is not typically American and would be only a stepping stone toward the complete socialist state. "If medicine does its part in defeating compulsory health insurance, it will have done much toward saving other fields of endeavor from the encroachment of government and can be accredited for playing a large part in preserving our present system of free enterprise," the Illinois Medical Society president continued. He stated, "The doctors and people opposed to government control must not be complacent, but must always be prepared to go into action against added government domination." He warned his colleagues not to be lulled into thinking the bills in favor of compulsory health insurance have been dropped. The bills are not dead, only sleeping, and can be easily aroused.

Dr. George Braunlich, of Davenport, delegate to the American Medical Association, discussed the situation at the national level. He, too, emphasized that the halting of the present trend toward the complete welfare state is the responsibility of all the people rather than the physicians alone. He quoted Mr. Cecil Palmer, a noted English author, who stated regarding the British health scheme, "We in Britain are finding that you cannot strengthen the weak or weaken the strong by replacing sound programs and competent people." Dr. Braunlich said, "Politicians will make most any concession in order to maintain political strength, and we must adopt methods of getting the message of medicine to the people so they will have an opportunity to form opinions on the basis of facts rather than on political promises."

Dr. N. G. Alcock, president of the Iowa State Medical Society, the next speaker, spoke concerning the activities of the district councilors and the educational situation at the State University. Dr. Alcock thinks the Iowa State Medical Society must rejuvenate the council in order to obtain absolute continuity, and that the state organization should establish a policy of electing as president of the State Society only those who have served previously on the council. He believes this would give the president a better understanding of the problems and programs of the Iowa physicians. President Alcock believes that an increase in the number of general practitioners graduated from the State University would relieve the demand for more physicians. In line with this thinking, Dr. Alcock has appointed a committee to study the general practice field. He believes the present trend toward specialization must be halted if we are going to supply country doctors.

The meeting, the first of its kind for a few years, was well attended by the doctors in the eighth district.

Donald L. Taylor

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ARTERIAL HYPERTENSION; Its Diagnosis and Treatment—By *Irvine H. Page*, M.D., and *Arthur Curtis Corcoran*, M.D., Research Division of the Cleveland (Ohio) Clinic Foundation. Second Edition. Chicago, The Year Book Publishers, Inc., 1949. Price \$5.00.

MAY'S MANUAL OF DISEASES OF THE EYE—Edited by *Charles A. Perera*, M.D., Assistant Clinical Professor, College of Physicians and Surgeons, Columbia University, New York; Associate Attending Ophthalmologist, Presbyterian Hospital, New York. Twentieth Edition, Revised. Baltimore, Williams and Wilkins Co., 1949. Price \$5.00.

SURGICAL TREATMENT OF THE SOFT TISSUES—Supervising Editor, *Frederic W. Bancroft*, A.B., M.D., F.A.C.S., Associate Clinical Professor of Surgery, Columbia University; Attending Surgeon, New York City and Beth David Hospitals; Consulting Surgeon, Veterans Administration, Lincoln and Harlem Hospitals, New York, and Kings Park

(New York) State Hospital. Associate Editor, *George H. Humphreys*, II, A.B., M.D., Sc.D., F.A.C.S., Valentine Mott Professor of Surgery, Columbia University, College of Physicians and Surgeons; and Director of Surgical Service, Presbyterian Hospital, New York. Philadelphia, J. B. Lippincott Co., 1948. Price \$15.00.

A TEXTBOOK OF PHYSIOLOGY—Originally by *William H. Howell*, M.D.; Edited by *John F. Fulton*, M.D., Sterling Professor of Physiology, Yale University School of Medicine. Sixteenth Edition. Philadelphia and London, W. B. Saunders Co., 1949. Price \$10.00.

A TEXTBOOK OF SURGERY by American Authors—Edited by *Frederick Christopher*, B.S., M.D., F.A.C.S., Professor of Surgery, Northwestern University Medical School; Chief Surgeon, Evanston (Illinois) Hospital. Fifth Edition. Philadelphia and London, W. B. Saunders Co., 1949. Price \$13.00.

BOOK REVIEWS

CARE OF THE SURGICAL PATIENT

Including Pathologic Physiology and Principles of Diagnosis and Treatment

By *Jacob Fine*, M.D., Surgeon-in-Chief, Beth Israel Hospital; Professor of Surgery at Beth Israel Hospital, Harvard Medical School. Philadelphia, W. B. Saunders Co., 1949. Price \$8.00.

In approximately 500 pages the author has epitomized and condensed the latest thinking relative to the care of the surgical patient. The book is maturely clinical in approach, yet all discussion is based on sound principles of pathologic physiology.

Since the surgical patient represents more than his lesion, he must be considered in his entirety. To so admirably develop this theme, the author has divided the volume into six sections: I. General Considerations, II. Regional and Special Surgery, III. Endocrine Diseases and Hormone Therapy, IV. Coincidental Medical Illnesses in Surgical Patients, V. Clinical and Laboratory Methodology, and VI. General Preoperative and Postoperative Care.

For those responsible for the care of the surgical patient and/or his complications, this is a commendable reference.

H. H. S.

CORONARY ARTERY DISEASE

By *Ernst P. Boas*, M.D., Associate Physician, Mount Sinai Hospital, New York City; and *Norman F. Boas*, M.D. Chicago, The Year Book Publishers, Inc., 1949. Price \$6.00.

This proved to be an interesting book. Drs. E. P. and N. F. Boas have thoroughly covered the current literature, in addition to their rich experiences, on the subject of coronary artery disease. They have delved into all phases of the disease: embryology, physiology, differential diagnosis, complications and

therapy. I thought the chapters on benign heart pain and coronary disease in industry were exceptionally well written. The authors have described in detail the differential diagnosis between acute coronary insufficiency without myocardial infarction and that with myocardial infarction. The value of serial electrocardiograms was stressed in these cases.

I believe this text will prove to be popular with the medical profession. It should serve as an ever ready reference for our patient's coronary problems. Dr. Boas has aptly stated in the preface, "Hardly a day passes on which the physician . . . is not faced by a clinical problem arising from one of the early or late consequences of coronary artery disease."

G. H. F.

NUTRITION AND DIET IN HEALTH AND DISEASE

By *James S. McLester*, M.D., Professor of Medicine, University of Alabama, Birmingham. New, Fifth Edition. Philadelphia and London, W. B. Saunders Co., 1949. Price \$9.00.

This fifth edition contains revisions and additions in various chapters, especially in the one on the management of diseases. Dietary management of peptic ulcers has been changed and also the treatment of cirrhosis and other diseases of the liver. There is a revised chapter on the feeding of infants by Dr. Philip Jeans, professor of pediatrics at the University of Iowa, and an entirely new chapter on the feeding of surgical patients by Dr. Charles C. Lund, assistant professor of surgery, Harvard Medical School.

This textbook is written clearly and is generously illustrated with graphs and tables. I would recommend it for physicians, students of medicine and dietitians.

J. U.

HANDBOOK OF MATERIA MEDICA, TOXICOLOGY AND PHARMACOLOGY

By *Forrest Ramon Davison*, B.A., M.Sc., Ph.D., M.D., Consultant and Toxicologist, Minneapolis, Minn.; formerly Assistant Professor of Pharmacology in the School of Medicine, University of Arkansas, Little Rock; Medical Department, the Upjohn Company, Kalamazoo, Mich.; Assistant Professor of Pharmacology, University of Tennessee Medical School; Toxicologist to University Clinics, Memphis, Tenn. Fourth Edition. St. Louis, C. V. Mosby Co., 1949. Price \$8.50.

In this new edition of a practical reference book, the author again strives to bring about the important correlation between clinical medicine and the basic sciences of therapeutics. This handbook is quite complete in coverage and would serve as a valuable guide to the medical student and the practicing physician. The adequate index is of great time-saving value. The discussion is terse, and the reference lists at the conclusion of the chapters provide adequate coverage.

M. E. A.

HOW TO BECOME A DOCTOR

A Complete Guide to the Study of Medicine, Dentistry, Pharmacy, Veterinary Medicine, Occupational Therapy, Chiropody and Foot Surgery, Optometry, Hospital Administration, Medical Illustration, and the Sciences. By *George R. Moon*, A.B., M.A., Examiner and Recorder, University of Illinois, College of Medicine, Dentistry and Pharmacy. Philadelphia and Toronto, The Blakiston Co., 1949. Price \$2.00.

Too often premedical students do not have reliable sources of information regarding the prerequisites and steps necessary for entrance to medical school. This book fills a need which has long been felt by those contemplating careers in medicine, dentistry, veterinary medicine and pharmacy. The author has assembled a reliable source of general information about the professional schools, such as location, tuition and admission requirements. Personal problems, such as finances, outside work, marriage and fraternities, are also discussed.

This book should be accessible to all contemplating a future in medicine, dentistry, veterinary medicine, pharmacy and allied professions.

T. Mc.

INTRODUCTION TO THE SZONDI TEST

Theory and Practice

By *Susan Deri*. With a Foreword by *Dr. Lipot Szondi*. New York, Grune and Stratton, 1949. Price \$5.00.

This book, published as a supplement and elaboration of Dr. Lipot Szondi's *Experimentelle Triebdiag-*

nostik, presents a description of the material and technic of administration of the test-result interpretation. The test was originally devised by Szondi to prove experimentally his theory of the role played by latent recessive genes in influencing psychologic reactions. According to this theory, the mental disorders represented in the test by photographs of a homosexual, sadist, epileptic, hysteric, catatonic schizophrenic, paranoid schizophrenic, manic depressive, depressive, and a manic depressive, manic, are of genetic origin. The patient is asked to choose those pictures he likes most and those he dislikes the most. His emotional reaction to these photographs is thought to depend, according to Szondi's theory, upon some sort of similarity between the subject's gene structure and that of the patient represented by the photograph. Regardless of whether one agrees with this theory, Deri demonstrates how the test has proved itself empirically to be a useful projective tool for those workers who have a broad background of psychoanalytic knowledge.

K. B.

1948 YEAR BOOK OF ENDOCRINOLOGY, METABOLISM AND NUTRITION

Endocrinology edited by *Willard O. Thompson*, M.D., Clinical Professor of Medicine, University of Illinois College of Medicine; Attending Physician (Senior Staff), Henrotin Hospital; Attending Physician, Grant Hospital of Chicago.

Metabolism and Nutrition edited by *Tom D. Spies*, M.D., Chairman, Department of Nutrition and Metabolism, Northwestern University School of Medicine; Director, Nutrition Clinic, Hillman Hospital, Birmingham, Ala. Chicago, The Year Book Publishers, 1949.

"In what percentage of women giving birth to 13 pound infants will diabetes develop? What study is better index of thyroid function than is the B.M.R.?" These are two examples of the provocative questions in the quiz on the cover of this *Year Book*. The answers may be found among the pages of this handy volume which reviews the outstanding articles of 1948 that contribute to our knowledge of endocrinology, metabolism and nutrition.

The critic is systematically divided into chapters devoted first to the endocrine glands separately, then to nutrition and finally to metabolism as it affects each of the bodily systems. The sections on the pituitary, adrenals and pancreas contain many hints of the tremendous progress being made in the study of our most prevalent endocrinopathy, diabefes mellitus.

Perusal of this edition refreshes the mind of the practitioner who is too busy to read all significant articles written on endocrinology during a year's time.

A. G. L.

THE AMERICAN NURSES DICTIONARY
The Definition and Pronunciation of Terms
in the Nursing Vocabulary

By *Alice L. Price*, B.S., R.N., Instructor
in Nursing Arts at Columbia Hospital, Mil-
waukee, Wis. Philadelphia and London, W.
B. Saunders Co., 1949. Price \$3.75.

This dictionary of approximately 25,000 words has been prepared for students of nursing and is not intended for physicians. It is, however, well constructed; terms are clearly and briefly defined; and pronunciation is also clearly indicated. The book should prove exceedingly useful not only to student nurses but to graduate nurses, medical technologists, physiotherapists and others working in fields allied to medicine.

R. F. B.

REGIONAL ILEITIS

By *Burrill B. Crohn*, M.D., Consulting
Gastroenterologist, Mount Sinai Hospital,
New York. New York, Grune and Stratton,
1949. Price \$5.50.

The material for this book was gathered primarily from the author's personal experience with a series of 298 cases of regional enteritis. The largest group consisted of 222 cases of chronic regional ileitis, while the remainder was composed of 16 cases of acute ileitis, 38 of ileojejunitis and 22 of combined small and large bowel involvement. Thus, the greatest space is allotted to the discussion of regional enteritis.

The author mentions the various etiologic factors which have been considered but disregards most of them with the exception of trauma. He points out the experiences reported by others and describes 6 cases in his own series in which the symptoms of regional ileitis followed shortly after some major trauma to the abdomen. Thus, it was decided that trauma definitely can cause regional enteritis.

One excellent chapter is devoted to a discussion of fistula formation, in which the significance of a history of, or the presence of, perirectal abscesses or fistulas concomitantly with other suggestive symptom is strongly emphasized as being diagnostic for regional enteritis.

Crohn expresses the opinion that, although a small per cent of patients, 5.4 per cent in his series, develop spontaneous cures with conservative therapy, procrastination while determining the course of the disease increases the risk for surgical failure.

He then discusses the various surgical procedures favored by different clinics throughout the country and presents statistics reported by each for comparison with his. He favors ileocolostomy with transection of the ileum as a definite procedure. In 57 cases in which this procedure was utilized there was a zero mortality with 10.5 per cent recurrences. This was considerably better than his experience with the one and two stage resection.

This book represents a complete and moderately lengthy discussion of regional enteritis, also called Crohn's disease after the author, by one who certainly has had as much, if not more, experience with it than any other person. Probably it is for this reason that the author dwells for what seems at unnecessary length on different phases. Certainly, the book deserves praise and recommendations for reading.

N. G. H.

GERIATRIC MEDICINE

The Care of the Aging and the Aged
Edited by *Edward J. Stieglitz*, M.S., M.D.,
F.A.C.P. Attending Internist, Suburban
Hospital, Bethesda, Md.; Doctor's Hospital,
Washington, D. C.; Attending Internist
(Geriatrics), Chestnut Lodge, Rockville,
Md.; Consulting Internist, Washington
Home for Incurables; Associate, Washing-
ton School of Psychiatry; Special Lecturer,
Institute of Industrial Medicine, New York
University, Bellevue Postgraduate Medical
School; Professor of Medicine, Rush Medi-
cal College, the University of Chicago.
Philadelphia and London. W. B. Saunders
Co., 1949. Price \$12.00.

Dr. Stieglitz readily demonstrates that the field of geriatric medicine covers a special cross-section of medicine, surgery and the specialties, and he has admirably fused the knowledge and experience of many contributors into this interesting and illuminating second edition of his book.

To orient the reader the initial presentation in the book is, properly, the "Foundations of Geriatric Medicine," including sections on such subjects as the Biology of Aging, the Clinical Problems of Aging Man, Socioeconomic Problems, Economic Problems, Industrial Problems and, finally, Cultural Problems. The normal structural, physiologic and psychologic changes are then adequately discussed, and basic principles in caring for the aging and aged are given thorough attention. It is certain that the reader will be delighted and enlightened by the divisions of the book from then on, covering the disorders of the different great systems of the body, and by the practical, up-to-date and complete information given under each division.

This is not a condensed treatise on medicine and surgery, but it is a volume covering that portion of the respective fields of men who deal with the geriatric patient, men who are well known for their authority.

The book is readily adaptable for reading and reference, and, for the practitioner dealing with these old folk and the many problems they present in so many fields, such a tome is a beacon in a storm.

W. M. S.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. ROGER M. MINKEL, Fort Dodge

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Corresponding Secretary—MRS. CHARLES H. COUGHLAN, Fort Dodge

LINES FROM THE PRESIDENT

The pamphlet, "It's Your Crusade, Too!," mailed to every Auxiliary member by our national president and to every doctor in our state by the Iowa State Medical Society, gives us specific campaign procedures to follow. If studied with the outlines of the program of our State Auxiliary, it will make each of us "a well informed, educated member." Our general program of self-education, our Auxiliary discussion groups at county and district meetings and our specialized programs will result in directed action. The cumulative result of the concentrated effort of the Auxiliary will be a definite contribution to the county and state medical societies.

The first district meeting of the Auxiliary has been called by Mrs. Donovan Ward, state councilor for the northeast district. The program was planned for the dissemination of up-to-date information concerning the aims and plans of the Auxiliary. The county presidents were invited to bring other members from their counties, and invitations were also issued to the members-at-large. After the conference and luncheon meeting, the group were guests at a tea to launch the Craft and Hobby Show for the Iowa Society for Crippled Children and Adults which was sponsored by the Dubuque Auxiliary.

There will be other meetings held over the state, and when you receive your invitation we hope to see you at the meeting. Our Auxiliary is in a unique position, as we stand between the layman and the medical profession, and ours is an obligation to interpret the principles and aims of the physician to the public. To do so, we must be well informed.

Mrs. Roger M. Minkel

FALL BOARD MEETING

Twenty-six members of the Executive Board of the Woman's Auxiliary to the Iowa State Medical Society were present at the meeting and luncheon held at the Hotel Fort Des Moines September 21. Mrs. Roger M. Minkel, president, presided over the meeting.

In the absence of the chairman, Mrs. W. R. Hornaday, Mrs. Robert Mason reported for her that there is a balance on hand to date of \$187.27 in the Nurses' Loan Fund. Fifty cents per member from each county auxiliary is urgently needed if this revolving fund is to continue its usefulness.

Mrs. L. K. Shepherd and Mrs. A. B. Phillips, public relations chairmen, discussed the need of creating

better understanding of campaign work with county medical societies by stressing the need for an advisor for each Auxiliary from its medical society.

The Board voted to send subscriptions of *The Bulletin* to the president and president-elect of the Iowa State Medical Society and to the advisor of the Woman's Auxiliary to the Iowa State Medical Society.

Mrs. Marion Brinker, chairman of the Budget Committee, presented the following budget, which was accepted:

National dues	\$ 800
Printing	100
Supplies	75
Postage	150
Telephone	50
President's Expenses	100
Convention	125
Organization	200
Special Committee Expenses	100
Miscellaneous	150

Total\$1,850

It was generally agreed that district meetings in councilor districts would help county Auxiliaries to function better and would increase membership. A general plan of a luncheon followed by roundtable discussion with Auxiliary material available on tables would be successful. State officers and chairmen of standing committees would attend wherever possible to aid the district councilor.

As the luncheon speaker, Dr. Fred Sternagel urged that Auxiliary members quietly use every opportunity to place trained speakers before the various organizations to which doctors' wives belong. Speakers may be secured through the Speakers Bureau of the Iowa State Medical Society, 505 Bankers Trust Building, Des Moines. He urged the continued distribution of available material pertaining to socialized medicine and advised that all doctors' wives be thoroughly familiar not only with the affirmative but also with the negative sides of socialized medicine. Compulsory health insurance would cost the nation six billion dollars per year. Not enough people are aware that socialized medicine would cost each individual in the United States \$80 per year and an estimated \$320 per family. Blue Cross and Blue Shield cost \$62.50. The unemployed would receive no benefits from compulsory health insurance.

Mrs. K. M. Chapler,
Publications Chairman

The Woman's Auxiliary Executive Board, at their meeting September 21, voted to send the following telegram to Iowa's Senators, Gillette and Hickenlooper:

"The Woman's Auxiliary to the Iowa State Medical Society wishes to express appreciation for your thorough and considerate attention given all health bills. You are voting for the best interests of the individual American citizen. The 800 members of this organization ask you to continue your vigilance."

(signed) Woman's Auxiliary,
Iowa State Medical Society,
By Corresponding Secretary,
Mrs. C. H. Coughlan.

"Dear Mrs. Coughlan:

I have your telegram of September twenty-third and sincerely appreciate the expression of approval of my activities in connection with health legislation. You may be assured that I shall continue my opposition to legislation that would lead to development of a program of socialized medicine.

Yours sincerely,

(signed) Bourke Hickenlooper."

"Dear Mrs. Coughlan:

This is just a brief note to thank you for your telegram of September twenty-third, commending my vote and efforts in connection with legislation with which your Auxiliary is so much concerned. It was very kind of you to send this communication.

With kind personal regards, I am

(signed) Guy Gillette."

FASHION SHOW

Members of the Polk County Medical Auxiliary under the auspices of the Woman's Auxiliary to the Iowa State Medical Society sponsored a fashion show at Younkers Tea Room in Des Moines the afternoon of September 21. Mrs. F. Eberle Thornton was general chairman. Committee chairmen were: Mesdames A. B. Phillips and L. K. Shepherd, tickets; Robert Mason and Howard Smead, publicity; Arthur Downing and Leo Pearlman, models; and Floyd Springer, hostesses.

The following doctors' wives acted as models: Mesdames Douglas Gibson, Ralph Dorner, J. B. Synhorst, Leo Pearlman, Ralph Snodgrass, Joseph Priestly, Alonzo Jenks, Robert Hoffman, Louis Goldberg and R. H. Riegelman.

Constance Weber, associate editor of *Vogue*, was the commentator of the show which included furs and French dressmaker models.

There were 637 tickets sold; 550 women attended, and a profit of \$1,275 was turned over to the Iowa Society for Crippled Children and Adults to purchase therapy equipment for the Iowa Rehabilitation Center at 2917 Grand Avenue. This center is the only one of its kind in the state and serves adults as well as children as a treatment center and workshop.

MEDICAL—PRESS—RADIO CONFERENCE

Mrs. E. B. Howell, of Ottumwa, and Mrs. N. F. Veltman, of Winterset, attended the Medical-Press-Radio Conference at the Savery Hotel September 23. The conference was sponsored by the Iowa State Medical Society in the interests of better public relations.

Kenneth MacDonald, executive editor of *The Des Moines Register and Tribune*, pointed out that medical ethics prevent doctors from making public information about patients, and reporters who are only trying to do their job sometimes have difficulties. Information concerning births, deaths and accidents of people in all walks of life is sometimes unobtainable from hospitals because of inability to contact persons who have the authority to comment. Cooperation should be the keynote of doctors, radio and newsmen. A common meeting ground of expression and understanding should be shared in the face of the progress of atomic science and government medical plans.

In line with this thought Mr. Edward Breen, manager of radio stations KVFD-KFMY, Fort Dodge, pointed out that radio can be a forceful means of presenting information about government medicine to the largest number of people in the briefest time. A series of medical programs, "The Doctor Speaks," carried over these stations was quite successful.

Mrs. Molly M. Samore, the wife of a Sioux City lawyer and a British war bride, discussed socialized medicine in England. She was raised and educated in the best English schools and is thoroughly familiar with daily life there. Reports as to the degeneration of the practice of medicine in England have not been exaggerated. The greatest loss has been the doctor-patient relationship. She feels sure that her relatives in England have not had "full stomachs in 10 years." The devaluation of the pound will only make life harder there.

W. A. Richardson, Rutherford, N. J., editor of *Medical Economics*, who recently spent a month in England, believes that certain classes of English people are so impoverished that they need medical aid of a sort, just as certain classes of people do in the United States, but a government plan should not include those who do not need it. On the other hand, the British doctors are subject to the state rather than to the patient, and that constitutes a moral issue. Mr. Richardson felt that many cases of early tuberculosis and cancer are going undetected because some doctors have consultations of only one and one-half minutes. "There are not enough nurses, doctors or appliances. One may have to wait 18 months to obtain hospital space for a tonsillectomy." Some less skilled and unscrupulous doctors like the British system because of more pay and because they do not have to buy a practice.

Dr. Nathaniel G. Alcock, Iowa City, president of the Iowa State Medical Society, pointed out that Iowa is probably not short of doctors from the numerical standpoint, but so many men train for specialties because of "scientific atmosphere, better in-

come and more regular hours." There is a vital need for more general practitioners.

Dr. J. Stuart McQuiston described the "general practice residency" for interns which is being used at St. Luke's Hospital, Cedar Rapids. Interns accompany practicing doctors not only in the hospital but on house calls and also "observe practice in the private offices of older men."

ATTEND NATIONAL BOARD MEETING

Mrs. Roger M. Minkel, president, and Mrs. C. H. Mitchell, president-elect of the Woman's Auxiliary to the Iowa State Medical Society, attended the Woman's Auxiliary to the American Medical Association Board meeting held in Chicago at the Sherman Hotel on November 3 and 4. The state presidents were called upon for a discussion of their respective state Auxiliary activities. The conference agenda included talks by officers and personnel of the American Medical Association. A full report of the Board meeting will be found in the December issue of *The Bulletin*.

ANNUAL MEETING CHAIRMAN NAMED

Mrs. C. H. Lohman, of Burlington, Des Moines County Auxiliary, has been named as the annual meeting general chairman. Mrs. C. L. Putnam, of Des Moines, Polk County Auxiliary, who was general chairman for the 1948-1949 annual meeting is acting as advisor to the Des Moines County Committee.

PROGRAM MATERIAL

Copies of the program of the American Medical Association for the advancement of medicine and public health are available at Auxiliary Headquarters. "What is the A.M.A.?" a reprint of the article appearing in *Look Magazine*, October 11, is also recommended as program material and may be obtained from Mrs. C. H. Coughlan, Corresponding Secretary, 629 Eleventh Ave., North, Fort Dodge, Iowa.

ACTIVITIES OF COUNTY AUXILIARIES

Clay County Medical Auxiliary was one of four groups which displayed medical exhibits at the Clay County Fair in September. Literature on various medical units was distributed.

Delaware County Medical Auxiliary met September 21 at the Glen-Charles Hotel. Mrs. C. L. Meyer, Manchester, Mrs. W. C. Zabloudil and Mrs. M. F. Piburn, Hopkinton, joined the Auxiliary. Mrs. Arlene Raymond, of Independence, second district vice chairman of the Republican State Central Committee, addressed the group on the topic, "My Responsibility as a Citizen." Mrs. G. P. Schroeder, of Independence, was a guest.

Mrs. B. H. Byers

Following a joint luncheon with the doctors at the Horse n' Buggy Inn, Adel, September 29, the Dallas-Guthrie Medical Auxiliary met in Dr. Fail's office. Thirteen members and two guests were present, and Mrs. R. F. Deranleau, of Perry, became a new member.

Mrs. C. A. Nicoll, Panora, vice president, presided in the absence of the president, Mrs. D. W. Todd. Mrs. C. R. Osborn urged that subscriptions to *Hygieia* be submitted early. Mrs. H. W. Smith, public relations, reported that 125 women had taken examinations in the hope of becoming licensed practical nurses. Mrs. K. M. Chapler, legislation, reported on the State Fall Board meeting and laid stress on self-education, securing material on socialized medicine from Auxiliary headquarters for personal and lay use and recommending available speakers to lay organizations as well as knowing the Twelve Point Program of the A.M.A. The secretary was instructed to send a note of sympathy to our member, Mrs. H. F. Clark, whose husband died September 1. He will be greatly missed by the Dallas-Guthrie group.

Mrs. Louella Gunn, executive secretary of Polk County Tuberculosis and Health Association, explained the need for voluntary health funds and stated that one-half of the national fund which will result from the sale of tuberculosis seals this year will be devoted to research on cardiac diseases. She spoke also of the need for local health units and legislation pertaining to them.

Mrs. C. E. Porter

The Woman's Auxiliary to the Greene County Medical Society met with the doctors for a seven o'clock dinner at the Woman's Club House, Jefferson, September 29. There were 26 present. After dinner, movies of general entertainment nature were shown.

Mrs. J. T. Limburg, Jr.

The Marshall County Medical Auxiliary met at Stone's Restaurant, Marshalltown, October 4, with 23 members present. The new officers are: Mrs. Earl Keyser, president; Mrs. R. C. Carpenter, vice president; Mrs. M. E. Jeffries, secretary; and Mrs. Edwin Marble, treasurer.

Pamphlets concerning compulsory health insurance were distributed by the president, and a discussion followed as to ways and means of getting these before the public. Our special projects have been assisting with the Blue Cross drive in this community, nurse recruitment, nursing survey, inoculation of rural school children and cancer drive. Members have helped also wherever volunteer service is needed, such as the Crippled Children's Clinic, which is held periodically.

Mrs. M. E. Jeffries

CORRECTION

State dues of \$2.00 per member will be payable to the State Treasurer Jan. 1, 1950. These are annual and not monthly dues as stated in the October issue.

SOCIETY PROCEEDINGS

MEETINGS

Black Hawk County

The Black Hawk County Medical Society met October 18 at the Elk's Club in Waterloo. An experimental program, using two movies entitled "Cancer of the Breast" and "Moles and Melanoma," were presented under the direction of Dean Bruce Mahan of the SUI extension division and Mr. Ralph Creer of the A.M.A. Chicago office. Drs. C. J. Mikelson and T. L. Trunnell led the discussion which followed.

Carroll County

At the October 18 meeting of the Carroll County Medical Society, Dr. Leo H. Kuker reported on the Medical-Press-Radio Conference of the Iowa State Medical Society.

Iowa and Illinois Central District

Guest speakers at the quarterly meeting of the Iowa and Illinois Central District Medical Association, held September 28 at Black Hawk State Park, were Dr. Walter Lincoln Palmer, of the department of medicine at the University of Chicago, and Dr. Danely P. Slaughter, associate professor of surgery at the University of Illinois and senior attending surgeon at St. Francis Hospital, Evanston, Ill. Dr. Palmer spoke on "The Problem of Peptic Ulcer" and Dr. Slaughter on "Recent Advances in the Therapy of Cancer." Also included on the program were colored motion pictures. Discussion periods were moderated by Dr. Robert A. Towle, of Davenport, and Dr. H. P. Miller, of Rock Island, Ill.

Cerro Gordo County

The Cerro Gordo County Medical Society met October 11 at Hotel Hanford in Mason City. Following dinner and a short business meeting, Dr. Frederick C. Brush spoke on "Indications for Prostatectomy."

Dallas-Guthrie

At the meeting of the Dallas-Guthrie Medical Society in Adel on September 29, Dr. Addison Brown, of Des Moines, spoke on "Office Gynecology." Following his lecture, a short business meeting was held.

Delaware County

The Delaware County Medical Society met with its Auxiliary at the Glen-Charles Hotel in Manchester on September 21. Following dinner, separate meetings were held. Dr. E. G. Zimmerer, of the State Department of Health, presented a film on cancer to the medical group. Three new members, Drs. C. L. Meyer, of Manchester, and Warren C. Zabloudil and Marvin F. Piburn, of Hopkinton, were welcomed.

Hancock-Winnebago

The Hancock-Winnebago Medical Society held a dinner meeting September 22 in Britt. Dr. H. W. Morgan, of Mason City, chairman of the American Cancer Society for this district which covers several states, led a group discussion on cancer and explained measures now being taken by the American Cancer Society for the treatment and prevention of the disease.

Kossuth County

At the September 20 meeting of the Kossuth County Medical Society, it was voted to sponsor an advertisement giving the American Medical Association's arguments against socialized medicine.

Linn County

Dr. A. A. Weech, professor of pediatrics at the University of Cincinnati, spoke at the Linn County Medical Society meeting October 14 in Cedar Rapids. His paper, "Paving the Way for Accepting the Inevitable," was discussed by Dr. Philip C. Jeans, professor of pediatrics at the University of Iowa, and by Dr. Walter Block, of Cedar Rapids.

Page County

The Page County Medical Society was host to the Fremont County Medical Society at a dinner meeting held September 22 at the Clarinda Country Club. Dr. Willard Ergenbright, orthopedic surgeon at University Hospitals, Iowa City, spoke on "Injuries to Hands and Forearms."

Polk County

The Polk County Medical Society held a dinner meeting September 23 at the Savery Hotel in Des Moines. Also present to hear Mr. William Alan Richardson, of Rutherford, N. J., editor, *Medical Economics*, who spoke on the British National Health Plan, were many lay persons.

Pottawattamie County

The Pottawattamie County Medical Society met September 20 and approved a new medical fee schedule for the care of county indigent patients, which increases the fees about one-third. Following dinner and a business meeting, Dr. Gordon Best spoke on "Electrocardiography" and Dr. C. F. Lowry on "Substance 'E' for Treatment of Arthritis."

Wapello County

Five new physicians were elected to membership at the regular meeting of the Wapello County Medical Society held on October 4. They are Drs. Stephan Fox, Lloyd J. Gugle, William D. Maixner, Philip D. McIntosh and Philip H. Voorhees, all of Ottumwa. Dr. Stephan Fox, of Ottumwa, discussed the subject, "The Painful Foot."

Woodbury County

The regular dinner meeting of the Woodbury County Medical Society was held October 21 in the Mayfair Hotel in Sioux City. Dr. L. A. Calkins, head of the department of obstetrics and gynecology, University of Kansas, School of Medicine, spoke on "The Management of Carcinoma of the Cervix."

Wright County

The Wright County Medical Society was host to doctors from Wright, Hamilton, Hancock and Humboldt Counties at a dinner meeting September 15 at the Eagle Grove Country Club. Dr. Arnold Gordon, of Des Moines, spoke on "X-Ray Interpretation."

PERSONALS

Dr. Nathaniel G. Alcock was honored by the Mississippi Valley Medical Society at its fourteenth annual meeting in St. Louis September 29. Dr. Alcock received the Distinguished Service Award for 1949 "for unusual and distinguished service to the medical profession."

Dr. James H. Allen, professor of ophthalmology at the University of Iowa, College of Medicine, has been named North American commissioner of ophthalmic education of the Pan-American Association of Ophthalmology.

Dr. Walter M. Block has successfully completed the examinations and become a diplomate of the American Board of Pediatrics.

Dr. Roy G. Brown, Jr., of Onawa, has moved to Crawford, Neb.

Dr. Kenneth L. Buresh, who has been practicing with his uncle, Dr. Abner Buresh, in Lime Springs, has opened an office in Baxter. Dr. Buresh is a graduate of SUI College of Medicine and served his internship in Chicago.

Dr. T. Lyle Carr, assistant professor of internal medicine at SUI College of Medicine, has been named an associate professor.

Dr. Edward C. Clark, who has been senior assistant in neurology and head of the electro-encephalographic laboratories at Henry Ford Hospital, Detroit, has been appointed assistant professor of neurology at SUI College of Medicine. Dr. Clark was graduated from Western Reserve University and completed his internship and residency training at Iowa.

Dr. W. Gordon Doss, of Mount Ayr, has moved to Lamoni, where he will be associated with Dr. E. E. Gamet.

Dr. Bernard B. Dwyer, who has been practicing in Preston for nine years, has purchased a home in Clinton and opened an office in Lyons for the practice of internal medicine.

Dr. L. H. Flancher, head of the division of tuberculosis control of the State Department of Health, has resigned effective November 15. Dr. Flancher will go to the Sand Beach Sanatorium at Lake Park, Minnesota, as superintendent and medical director.

Dr. Rubin H. Flocks has been named professor and head of the department of urology at the SUI College of Medicine. Dr. Flocks, who came to the University in 1932 as an assistant in urology, succeeds Dr. Nathaniel G. Alcock.

Dr. Robert H. Harris has moved from Broadview, Ill., to Long Beach, Calif., where he will practice his specialty, dermatology.

Dr. Lester R. Hegg, of Rock Valley, spoke on "Socialized Medicine" to his fellow Rotarians at their regular luncheon meeting held September 12.

Dr. Christine Ericksen-Hill, one of the original members of the Council Bluffs Clinic, has announced her retirement from the practice of medicine after 46 years.

Dr. William C. Keettel, of SUI College of Medicine, delivered two papers before the Wisconsin State Medical Society's annual meeting in Milwaukee on October 3, 4 and 5.

Dr. Horace H. Kornis has moved from Dubuque to Iowa City, where he has opened an office for the practice of internal medicine.

Dr. Leo H. Kuker has been elected to fellowship in the American College of Surgeons. Convocation ceremonies were held in Chicago on October 21.

Dr. James R. Mason, new Ainsworth physician, was honored at a dinner given by the Chamber of Commerce at Washington Country Club. Dr. C. A. Boice was the principal speaker, giving an address on the development of medical practice in Washington County, with special reference to Ainsworth.

Dr. Paul Meyer has opened an office in Manchester for the practice of medicine and surgery. Dr. Meyer was graduated from SUI College of Medicine and served his internship at Wayne County General Hospital, Detroit, Mich.

Dr. Cornelius B. Murphy, of Alton, gave an address on the human heart before the Marcus Rotary Club on September 20.

Dr. Charles A. Nicoll, of Panora, spoke before the Ankeny Kiwanis Club on October 6 on the subject of "Socialized Medicine."

Dr. Frank Raymond Peterson, of Cedar Rapids, addressed the Clinton County chapter of the American Cancer Society at its annual meeting on September 22.

Dr. John W. Saar, of Keokuk, spoke on general health conditions in Keokuk at the regular meeting of the Rotary Club there September 22.

Dr. David Weaver, of Davenport, spoke on "Preventing Emotional Problems" at the meeting of the preschool child study class of Johnson School on October 11.

Speakers at the East Iowa Mental Health Institute, held in Davenport on September 24, were Drs. Wilbur R. Miller, of Iowa City, Dr. John C. McKittrick, Burlington, and Max E. Witte, Independence.

Six Council Bluffs surgeons demonstrated surgical technics for the Iowa Clinical Surgery Society on September 24. They were Drs. F. E. Bellinger, Fred H. Beaumont, E. M. Limbert, G. V. Caughlan, J. P. Cogley and J. D. Hennessy.

MARRIAGE ANNOUNCEMENTS

Johnson-Kaack

Miss Helen Louise Johnson, daughter of Mr. and Mrs. Charles J. Johnson, of Davenport, and Dr. Harry Frederick Kaack, Jr., son of Dr. and Mrs. Harry Frederick Kaack, of Clinton, were married September 24 at Grace Episcopal Church in Davenport.

Nack-Huber

Miss Lenore Marie Nack, daughter of Mr. and Mrs. Louis A. Nack, of Galena, Ill., and Dr. Robert Henry Huber, of Cedar Rapids, the son of Mr. and Mrs. H. J. Huber, of Charles City, were married September 17 in St. Mary's Church in Galena.

DEATH NOTICES

Bannister, Murdoch, 80, Ottumwa physician for 54 years, died September 21 at a local hospital. Born in Detroit, Dr. Bannister was graduated from the University of Pennsylvania in 1894 and spent a year in residency at Polyclinic Hospital in Philadelphia, locating thereafter in Ottumwa. From 1910-1913 he served as a member of the Iowa State Board of Control and sponsored establishment of the state hospital for epileptics and the law for county hospitals and sanatoriums. Dr. Bannister was in the first (1918) class of flight surgeons in the air forces and pioneered work in "fitness to fly" tests. Dr. Bannister was a life member of the Wapello County and Iowa State Medical Societies.

Hyatt, Charles N., 79, practicing physician in Albia for 55 years, died September 22 at his home, after having been in failing health for several months. Born in Ohio, Dr. Hyatt was graduated from the University of Iowa College of Medicine in 1894, beginning practice the same year. Dr. Hyatt

was Monroe County coroner for 32 years and was insanity commissioner and member of the municipal waterworks board of trustees. He was a life member of the Monroe County and Iowa State Medical Societies.

Skelley, William F., 79, who served as Scott County coroner for five years, died September 25 at San Diego, Calif. Born in Goshen, Ind., Dr. Skelley was graduated from Keokuk Medical College. He practiced for many years in Lost Nation and Maquoketa, and in Davenport from 1908 until his retirement in 1940. He was a former member of the Scott County and Iowa State Medical Societies.

BLUE CROSS-BLUE SHIELD RETENTION PROGRAM

Hospital Service, Inc., of Iowa and Iowa Medical Service, our local Blue Cross and Blue Shield Plans, continue to increase enrollment. Enrollment in H.S.I.I. was 489,250 as of Sept. 30, 1949, and membership in the statewide Blue Shield Plan had increased to 141,069.

As the selling program moves consistently ahead, insurance representatives move in on the momentum of Blue Cross-Blue Shield, and members are apt to change coverage, thinking they are getting more benefits. When these companies do not fulfill the impressions of coverage gained by the people, these policyholders become confused on all programs and are fertile ground for the seeds of so-called "free government health services."

Blue Cross and Blue Shield by their nature are group plans with group selling, but individual contacts by insurance agents are very effective, although more expensive. This is evidenced by comparing acquisition costs and loss ratios in annual statistics issued by national underwriting companies.

In order to keep our members more fully informed on the broad benefits of the nonprofit, prepayment plans, the Blue Cross-Blue Shield Commissions have inaugurated a nation-wide educational program in which the local plans will participate. Bulletin-board posters, hand-out messages, small poster mats for house organs and folders have been prepared as well as a dignified, lively, brief, yet complete folder for members who leave their jobs. A large percentage of these individuals who for one reason or another are no longer with their group do not retain their membership, probably due to the fact that they are facing unknown futures and the insecurity of changes or do not know they have this privilege. This program is to be put into action immediately.

Close cooperation of the medical profession and the hospitals with the plans in this program can accomplish much toward more fully informed members.

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No. 12

INDICATIONS FOR CESAREAN SECTION

William A. Boice, M.D., F.A.C.S., Chicago

The operation which we know as Cesarean section was mentioned as early as 14 B. C., but it was not until 1882 when Sanger described an accurate method of suturing the uterine muscle that the operation could be used with any degree of safety. Certain scientific tests can now be made, but there is no substitute for a careful clinical examination. Judgment and obstetric experience in balancing these mathematical tests with the clinical findings constitute the art of obstetrics.

Dystocia and hemorrhage are the principal reasons for which Cesarean section is indicated. The chief dangers of Cesarean section are hemorrhage and infection, particularly peritoneal infection.

The decision to perform a Cesarean section should be based on the following considerations:

(1) Is the danger to the mother and child going to be less by vaginal delivery than by Cesarean section? If so, Cesarean section is contraindicated.

(2) If the danger to mother or child is greater

by vaginal delivery, then Cesarean section is indicated.

(3) If, in the opinion of the obstetrician, the danger of Cesarean section and vaginal delivery is essentially equal, the type of delivery will depend upon the skill and ability of the obstetrician, and the decision must be based upon the ability of the individual to handle a certain type of case.¹

The maternal mortality following Cesarean section is five to ten times greater than that of vaginal delivery. Nor does Cesarean section guarantee a living baby, the fetal mortality being two to three times greater than that of vaginal delivery.

The largest single group of indications is that of fetopelvic disproportion. In determining whether or not a patient should have a Cesarean section because of disproportion, we must consider the following factors: (1) the size and shape of the pelvis and (2) the size of the fetus, particularly the size of the head.

It is impossible to determine the size and weight of the fetus either by physical examination or by x-ray. We get an idea of the size of the fetus by measuring the distance from the upper edge of the symphysis pubis to the fundus. The average pregnancy increases at the rate of 3 cm. every four weeks, so that the average-sized preg-

Presented at the Ninety-Eighth Annual Session, Iowa State Medical Society, Des Moines, April 18-21, 1949.

Table 1.—Ten Year Survey of Cesarean Section at the Augustana Hospital, Chicago

Year	Total Number Deliveries	Total Number Cesareans	Total Number Maternal Deaths	Died Undelivered	Maternal Deaths Following Cesarean	Maternal Deaths Following Pelvic Delivery	Total Number Neonatal Deaths	Fetal Deaths Following Cesarean	Fetal Death Following Pelvic Delivery	Stillbirth Total	Following Cesarean Section	Following Pelvic Delivery
1939.....	549	26	...	...	...	...	6	...	6	11	3	8
1940.....	611	25	1	...	1	...	4	...	4	8	...	8
1941.....	691	41	1	...	1	...	9	1	8	18	...	18
1942.....	876	26	...	...	...	...	9	...	9	21	...	21
1943.....	1,011	33	1	...	...	1	12	...	12	14	...	14
1944.....	908	31	1	...	...	1	13	1	12	17	1	16
1945.....	873	36	...	...	...	...	15	...	15	13	...	13
1946.....	1,009	36	...	...	...	...	10	1	9	13	...	13
1947.....	1,105	49	1	1	...	...	15	...	15	24	4	20
1948.....	1,033	55	1	...	...	1	12	1	11	16	...	16
Totals.....	8,666	358	6	1	2	3	105	4	101	155	8	147

Table 2.—*Indications and Results*

	Total No.	Multipara	Primipara	Age 15-25	Age 26-35	Age 36-40	Over 41	Babies		Mothers		
								Living	Stillborn	Living	Dead	Morbid
Repeat section.....	106	106	...	13	76	13	4	108	...	106	...	7*
Cephalopelvic disproportion.....	102	26	76	32	59	9	2	102	...	102	...	24
Preeclampsia.....	38	15	23	9	23	6	...	38	1	37	1	8†
Placenta praevia.....	24	16	8	4	18	2	...	23	2	24	...	3
Primary inertia, constriction ring and rigid cervix.....	23	7	16	3	17	1	2	23	...	22	1	8
Previous surgery and fibroids.....	18	8	10	1	11	5	1	17	1	18	...	3
Medical indications.....	14	9	5	5	8	1	...	14	...	14	...	2
Premature separation of a normal placenta.....	9	6	3	4	3	2	...	7	2	9	...	2
Eclampsia.....	7	2	5	1	5	1	...	7	...	7	...	...
Breech and transverse presentation....	7	2	5	...	4	1	2	6	1	7	...	1
Postmaturity and large baby.....	6	4	2	2	3	1	...	6	...	6	...	1
Previous fetal death and fetal disease..	4	3	1	...	3	...	1	4	...	4	...	1
Face-shoulder presentation.....	1	1	...	...	1	...	...	1	...	1	...	...
Ruptured uterus.....	1	...	1	...	1	...	...	1	...	1	...	1
Totals.....	358	203	155	73	231	42	12	355	7	356	2	58

* 2 sets twins.

† 1 set twins.

nancy measures approximately 30 cm. at term, before engagement takes place.²

Neither x-ray nor clinical examination will tell how much molding an individual fetus will undergo safely. Each case must be carefully considered, evaluating all tests, x-ray and laboratory, with the clinical findings.

We request x-ray measurement of the pelvis (1) in every case of a primigravida approaching term in which the head is unengaged, (2) in all cases in which a breech presentation is found, (3) in all cases in which there is a history of a difficult previous labor, particularly if it resulted in a mutilated or stillborn infant, (4) in all cases in which a primigravida is over 35 years of age, and (5) in all cases with a history of accident or injury to the pelvis or with a history of bony disease of the pelvis.

We use the Thoms^{1, 3, 4} method of measuring the pelvis by x-ray. We estimate the capacity of the pelvis by the methods of Weinberg and Scadron,⁵ Mengert,⁶ and Thoms and Schumacher.⁷ In the former the anteroposterior diameter of the inlet is added to the transverse diameter of the inlet. (Table 3.) If the anteroposterior is 10.5 or greater and the sum of the anteroposterior and transverse is 24 or more, the patient should be allowed to go into labor. Pelvic delivery is the rule. If the anteroposterior is 10 to 10.5 and the sum of the anteroposterior and transverse is between 22 and 24, a borderline disproportion exists. A test of labor is indicated, and pelvic delivery will usually occur. If the anteroposterior

is between 9 and 10 cm. and the sum of the anteroposterior and transverse is between 20 and 22, a relative disproportion is present. A short test of labor may be allowed. Section is probable. If the anteroposterior is between 7.5 and 10 and

Table 3.—*The Pelvic Inlet*

T.C. or AP	AP & Trans.	Pelvic Disproportion	Disposition	
Above 10.5	24 & up	None	Labor	Pelvic delivery the rule
10-10.5	22-24	Borderline	Test of labor	Pelvic delivery usual
9-10	20-22	Relative	Short test of labor	Section probable
7.5-10	Below 20	Absolute	Cesarian section necessary	

the sum of the inlet is 20 or less, an absolute disproportion is present. A Cesarean section is necessary.

Mengert has suggested that the length of the true conjugate be multiplied by the length of the transverse diameter and has pointed out that the average normal-sized inlet will have a sum of approximately 145. If, in a given case, the sum of the inlet is less than 85 per cent of normal, it is doubtful that pelvic delivery is possible.

The midpelvis is also measured on x-ray films, and estimates of its capacity are made according to the same methods. Weinberg and Scadron⁸ add the transverse diameter of the midpelvis, which is the distance between the ischiadic spines, to the length of the posterior sagittal, which is

the distance from the tip of the ischiadic spine to the junction of the coccyx and the sacrum. (Table 4.) With a borderline inlet, if engage-

Table 4.—*The Midpelvis*

Borderline Inlet	Sum of Inlet 22 or Less	Regardless of Inlet		
If engagement occurs	Sum of midpelvis 14 or less	Sum of midpelvis 14.9	Sum of midpelvis 13.5 or less	Sum of midpelvis 13 or less
Will pass thru midpelvis	Rarely have uncomplicated delivery	Usually require midforceps	Pelvic delivery rarely occurs	Pelvic delivery almost never occurs

ment occurs, the fetus should pass through the midpelvis. With a relative disproportion at the inlet, if the sum of the midpelvis is 14 or less, an uncomplicated delivery rarely occurs. Regardless of the inlet, patients having midpelvic sums averaging 14.9 will usually require midforceps operations. Patients with midpelvic measurements of 13 to 13.5 rarely deliver safely from below. Those having midpelvic measurements less than 13 almost never deliver from below.

Mengert has suggested that the bispinous diameter be multiplied by the anteroposterior length of the midpelvis, which is the length of a line drawn from the bottom edge of the symphysis to the sacrum, the line passing through the ischiadic spines. If this sum in a given case is less than 85 per cent of normal, which is 124.9, then the capacity of the midpelvis is inadequate.

Irving⁹ states in his review of 10 years of Cesarean section that an elective Cesarean section offers as good a maternal risk and is eight times safer for the fetus than a midforceps operation.

The outlet is measured by the rule of 15. These measurements are best obtained clinically. The x-ray can be used as a check. An outlet contraction rarely exists without midplane contraction. If the sum of the bituberous diameter and the posterior sagittal of the outlet is less than 15, a Cesarean section must be considered.

In addition to measuring and estimating the capacity of the pelvis, one must consider the type of pelvis in each case.¹⁰ A gynecoid or round female pelvis offers the best prognosis. In this type the transverse diameter is equal to, or less than 1 cm. greater than, the true conjugate. The anthropoid or long oval pelvis is next best. Here the true conjugate exceeds the transverse diameter. The platypellic or flat pelvis rates third place from a prognostic point of view. In this type the transverse diameter is greater than the true conjugate by 3 cm. or more. The head enters the inlet and descends in the transverse position. Asynclitism and deflexion attitudes are common. Dystocia is the rule. The poorest type is the android or male, where the transverse diameter

is from 1 to 3 cm. longer than the true conjugate. Here, too, the head enters in the transverse, and arrest may occur at any level.

When a questionable pelvis is present and the head is unengaged at term, the Müller-Hillis maneuver should be used. In this procedure one attempts to push the head into the pelvis to engagement. The chief errors in this maneuver are to be found in those cases in which the lower uterine segment is undeveloped and the cervix is thick and effaced. The operator will find difficulty in overcoming this soft tissue resistance and may assume that engagement is impossible when actually it could take place after effacement of the cervix. Another common error is that of estimating the head to be lower than its actual level.

It is well known that the longer a patient is in labor the higher the morbidity rate, and that

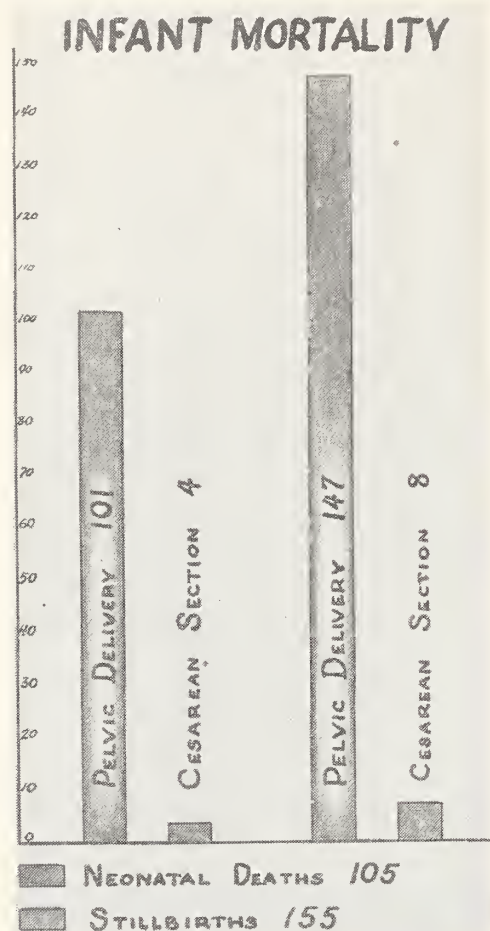
Table 5.—*Pelvic Types*

Type	Shape	Relation of AP to Transverse	Labor
Anthropoid	Long oval	AP greater than transverse	Usually normal
Gynecoid	Round or female	AP equals the transverse or is shorter by 1 cm. or less	Usually normal
Android	Funnel or male	AP shorter than transverse by 1 to 3 cm.	Head engages in transverse. May arrest at any level
Platypellic	Flat	AP shorter than transverse by more than 3 cm.	Dystocia. Head is transverse. Asynclitism and deflexion common

the maternal and fetal mortality rates rise in direct proportion to the length of labor. The length of a test labor cannot be predetermined. One must consider the shape and size of the pelvis, the size of the baby, the degree of molding of the head and the strength and frequency of the uterine contractions. If it is felt that labor is definitely established, and if contractions lasting 30 seconds or longer are occurring at five minute intervals or oftener and there has been some effacement of the cervix, the Müller-Hillis maneuver should be used at intervals of approximately three hours. If, at the second of two successive maneuvers, no progress has been made, a Cesarean section is indicated.

It has been advocated by some writers¹¹ that, if a patient has had a pelvic delivery without dystocia prior to a Cesarean section, she be allowed to deliver from below. The danger is that of rupture of the uterus. Certain definite conditions must be present if pelvic delivery is to be attempted. The patient must be under constant observation from the beginning of labor, and the operating room must be in readiness so that a Cesarean section can be performed at a moment's notice if there is any sign of maternal or fetal distress.

We have a rule that no patient who has painless bleeding in the last trimester of pregnancy will have a rectal examination. The patient is hospitalized, and, if there is further bleeding, the patient is taken to the operating room where, with all preparations made for a Cesarean section, a vaginal examination is done under sterile conditions. If the placenta is found to cover one half or more of the os, a Cesarean section is performed.



If the cervix is dilated 1 to 2 fingers or more, if less than one-half the os is covered and if the patient is not bleeding too much, the membranes are ruptured and the head is pushed into the pelvis where it acts as a tamponade. Labor is allowed to continue until dilatation is complete, and delivery can be accomplished from below. A Braxton-Hicks version can be done in those cases in which the fetus is not viable and it is felt that the pressure of the head will not be sufficient to stop the bleeding.

In premature separation of the normally implanted placenta the question of doing a Cesarean section depends on (1) the amount of bleeding, (2) whether or not the uterus is being infiltrated

by the blood, (3) the condition of the fetus, and (4) the amount of effacement and dilatation of the cervix. If the bleeding is thought to be of a relatively small amount, if the fetus is in good condition and if the uterus is not tense and painful, we feel that the patient can be safely delivered through the pelvis. However, if there is evidence of massive hemorrhage and if the uterine muscle is being infiltrated, then Cesarean section is indicated regardless of the condition of the fetus. The mother must be in satisfactory condition before surgery is attempted.

The principal medical conditions which have been used as indications for Cesarean section include heart disease, tuberculosis, diabetes and thyrotoxicosis. Hamilton and Thompson¹² have shown that cardiac patients do better with pelvic delivery if properly handled. Analgesia is used during the first stage of labor. Delivery is accomplished by forceps at full dilatation under satisfactory anesthesia with wide episiotomy. Cesarean section puts a greater strain on the heart.

In tuberculosis, Barone¹³ and his co-workers have found that the best results are obtained in patients delivered through the pelvis irrespective of the extent of the disease.

The problem in diabetes is twofold. First, the effect of diabetes on the pregnancy and, second, the effect of the pregnancy on the diabetes must be considered. The babies have a tendency to be above average in size and to die in utero before term. Simple control of the diabetes is not the answer, as 40 to 50 per cent will be lost either before delivery, intrapartum or in the first 24 hours postpartum.¹⁴ Pregnancy should be terminated about the thirty-sixth week. If disproportion is present or if the cervix is not ripe for induction, Cesarean section should be the procedure of choice.

Thyrotoxicosis is not an indication for Cesarean section.

Medical conditions should be treated as such and the pregnancy should be allowed to go along as normally as possible. A Cesarean section is to be used only in those conditions where there is a true obstetric indication.

A constriction ring which does not respond to medical treatment is an indication for Cesarean section.¹⁵ Such a ring can be diagnosed only by an intrauterine examination.

A rigid cervix may be an indication for Cesarean section. This condition will occasionally be seen following deep cauterization or following the use of radium in the cervix. Superficial linear cautery of the cervix and conization of the cervix should not interfere with dilatation of the cervix.

Primary uterine inertia is that state in which

weak and infrequent uterine contractions prolong labor from its onset in an otherwise normal case. If the membranes are intact and no disproportion exists, it is best to treat the patient expectantly. Use morphine or demerol and scopolamine to provide periods of rest, alternating with periods in

were a history of infection following the first operation.

Ovarian tumors should be removed about the end of the fourth month of pregnancy. Peduncular fibroids may be removed, preferably after the sixteenth week of pregnancy. Intramural fibroids should not be touched during pregnancy. Cesarean section is indicated if a tumor lies in front of the presenting part and will obstruct descent of the fetus. If the tumor is high in the abdomen, it is not an indication for section. If a Cesarean section is indicated for some obstetric reason, such a tumor may be removed if you do not prolong the operation and increase the risk to the patient.

Carcinoma of the cervix contraindicates pelvic delivery.

Preeclampsia and eclampsia were once considered absolute indications for Cesarean section. A patient on whom a diagnosis of preeclampsia has been made should be hospitalized. As long as she is holding her own, as shown by blood pressure readings, urine examinations and frequent blood chemistries, she should be treated conservatively. However, if she does not respond to this conservative method of treatment, if the cervix is not ripe, if the head is not engaged and the patient is obviously not a candidate for induction of labor by rupturing the membranes, a Cesarean section should be performed.

In eclampsia Cesarean section is rarely indicated. The reason for this is obvious. These patients are poor surgical risks. The fetus is rarely salvagable. These patients should be treated medically and allowed to go into labor. There may be an occasional case in which convulsions are controlled and the fetus survives the attack and appears to be in good shape. If the cervix is not ripe for induction, then a Cesarean section may be performed.

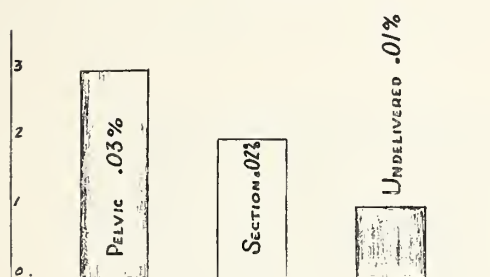
A breech presentation may be an indication for Cesarean section, particularly in primigravidas who have borderline or smaller measurements. It is impossible to estimate the size of the baby in a breech presentation, and it is not advisable to allow a test of labor in these cases.

If a transverse presentation is found and it cannot be corrected, Cesarean section is the procedure of choice.

In certain cases it may be felt that the baby is too large. These, of course, should actually be included in the fetopelvic disproportion group, because, although the patient may have had a previous pelvic delivery, the present pregnancy may be of such size that the pelvis is actually inadequate.

MATERNAL DEATHS

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which no analgesia is given, and allow labor to continue. Maintain the water balance and body chemistry with intravenous fluids. Premature rupture of the membranes adds a complication in prolonged labor. When definite signs of fetal or maternal distress are noted, a decision must be made regarding the type of interference which is best. These patients are potentially infected when the membranes have been ruptured over 12 hours. An extraperitoneal Cesarean section should be considered, although some good results have been obtained with the two flap, low cervical operation. A Porro Cesarean hysterectomy may be indicated in frankly infected cases if the operator has had no experience with the extraperitoneal technic. Maternal distress may be said to exist if the pulse rate has risen above 100 and if the mother's temperature is above normal. Fetal distress is present if there is an increase of the fetal heart rate above 180 per minute and if the fetal heart tones are irregular.

Previous surgery is seldom an indication for Cesarean section. If a large cystocele has been repaired and it seems probable that labor will injure this new bladder floor, pelvic delivery should not be attempted, as the bladder fascia cannot be protected by episiotomy and it is always more difficult to affect a good repair on successive attempts. Previous perineorrhaphy is not an indication for Cesarean section.

Previous myomectomy may be an indication for section. If one large or several smaller intramural fibroids have been removed and it is felt that the uterine wall has been weakened, section is indicated. This would also be true if there

A history of previous fetal death is not considered an adequate indication, for the incidence of neonatal death following Cesarean section exceeds that of pelvic delivery.

Face presentations can usually be delivered vaginally.¹⁶

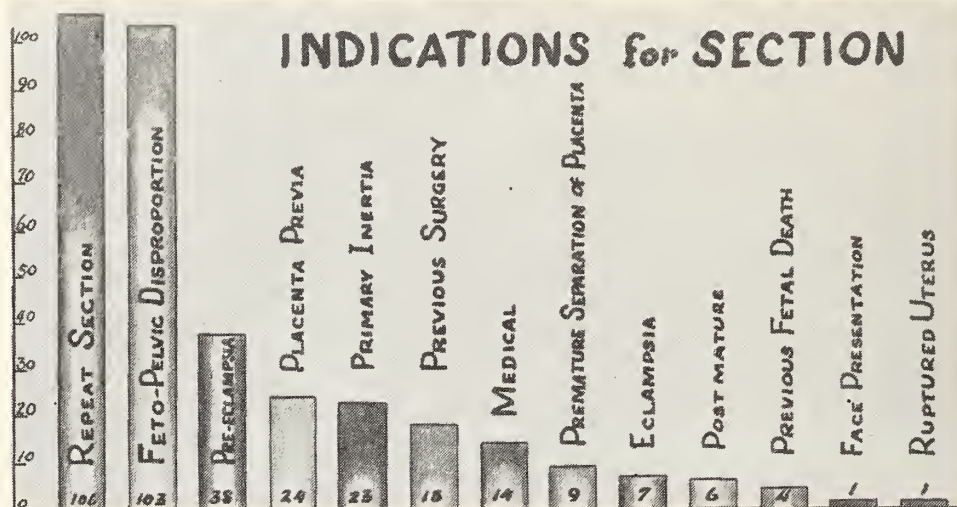
A rupture of the uterus is an absolute indication for laparotomy. The chance of getting a live baby depends on the extent and position of the tear and the length of time between the rupture of the uterus and surgery.

The desire to sterilize a patient is not an indication of Cesarean section.

9. Medical conditions may complicate a pregnancy but are not in themselves an indication for section.

10. The incidence of Cesarean section should not exceed 5 per cent, including repeat sections.

11. Every case must be considered as a separate entity. Obtain all information possible from the x-ray and laboratory and balance these facts against the clinical findings. Careful study and evaluation of each case will allow many patients to be delivered safely through the pelvis. Use Cesarean section only when pelvic delivery is a definite risk to mother and child.



Fetal monsters should be suspected, then diagnosed by x-ray and delivered from below unless there is some additional obstetric reason for performing Cesarean section.

Summary

1. Cesarean section is not a substitute for pelvic delivery.

2. Maternal mortality following Cesarean section is five to ten times greater than that following pelvic delivery.

3. Fetal mortality following Cesarean section is two to three times greater than that following pelvic delivery.

4. Dystocia and hemorrhage are the principal indications for Cesarean section.

5. Hemorrhage and infection are the great dangers of Cesarean section.

6. X-Ray measurements of the pelvis give valuable information concerning its size and shape.

7. X-Ray and clinical measurements of the fetus are still unreliable.

8. It is better to do a repeat section than to allow a pelvic delivery unless certain rigid conditions are fulfilled.

BIBLIOGRAPHY

1. Paxson, N. F.: Modern indications for Cesarean section. Clin. North America, xxviii:1487-1506 (December) 1948.
2. Titus, P.: The Management of Obstetric Difficulties, ed. 3. St. Louis, C. V. Mosby Co., 1945. p. 114.
3. Thoms, H.: Discussion of roentgen pelvimetry and description of roentgen pelvimeter. Am.J.Roentgenol., xlv:9-16 (July) 1940.
4. Thoms, H.: Clinical application of roentgen pelvimetry and study of results in 1,100 white women. Am.J.Obst.&Gynec., xlii:957-975 (December) 1941.
5. Weinberg, A.; and Scadron, S. J.: Value of pelvioradiography in management of dystocia. Am.J.Obst.&Gynec., xlv:245-254 (August) 1943.
6. Mengert, W. F.: Estimation of pelvic capacity. J.A.M.A., cxxxviii:169-174 (Sept. 18) 1948.
7. Thoms, H.; and Schumacher, P. C.: Clinical significance of midplane pelvic contraction. Am.J.Obst.&Gynec., xlviii:52-57 (July) 1944.
8. Weinberg, A.; and Scadron, S. J.: Value and limitations of pelvioradiography in management of dystocia, with special reference to midpelvic capacity. Am.J.Obst.&Gynec., lli:255-263 (August) 1946.
9. Irving, F. C.: Ten years of Cesarean section at Boston Lying-In Hospital. Am.J.Obst.&Gynec., l:660-680 (December) 1945.
10. Taylor, F. J.: Review of pelvic types and their consideration in obstetrics. Bull. Creighton Univ. School of Med., iii:66 (February) 1946.
11. Hindman, D. H.: Pelvic delivery following Cesarean section. Am.J.Obst.&Gynec., lv:273-285 (February) 1948.
12. Hamilton, B. E.; and Thompson, K. J.: The Heart in Pregnancy and the Childbearing Age. Boston, Little, Brown and Co., 1941.
13. Barone, C. J.; Fino, J. A.; and Hetherington, L. H.: Pregnancy complicating tuberculosis; survey for 11-year period. Am.J.Obst.&Gynec., liv:475-487 (September) 1947.
14. Reis, R. A.: Diabetes in pregnancy. J.Iowa M.Soc., xxxviii:41-45 (February) 1948.
15. Rucker, M. P.: Constriction ring dystocia. Am.J.Obst.&Gynec., lli:984-992 (December) 1946.
16. Reddoch, J. W.: Face presentation; study of 160 cases. Am.J.Obst.&Gynec., lvi:86-99 (July) 1948.

SURGICAL TREATMENT OF VARICOSE VEINS

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Varicosities of the lower extremities have been an important surgical problem since the earliest period of recorded medical history. Hippocrates employed multiple puncture of the veins. Galen used a hook to tear out varicosities. There has been a great deal written as the treatment of varicose veins has gone through the various stages of local excision, ligation^{1, 2, 3, 4} and injections with sclerosing agents either alone or in combination,^{5, 6} with or without the aid of pressure bandages.⁷ Progress has been made as the knowledge of the anatomy,⁸ pathology and physiology of the saphenous venous system has become better known.

The veins of the lower extremity are arranged in three sets, the superficial, communicating and deep. All are normally protected by valves to prevent the reverse flow of blood. The superficial system consists primarily of the long and short saphenous veins. The former passes along the inner aspect of the extremity from the foot to the deep vein at the fossa ovalis, while the short saphenous vein passes along the outer and posterior aspect of the leg to join the deep vein in the popliteal space. There are usually five veins emptying into the long saphenous near its femoral junction. In the thigh three to five communicating veins are generally found, while in the leg some 15 to 30 communicating branches occur between the superficial and deep venous systems.

Dilatation of the superficial veins may be due to gradual stretching or dilatation of the veins as a result of increased venous pressure, congenital structural weakness of the venous walls or valves or thrombophlebitis. As the valves become incompetent, stagnation occurs and dilatation increases. After a period of rest in bed incompetent veins may regain their tone, but later, when the upright position is resumed, dilatation again recurs. Following thrombophlebitis the dilatation may not be great because of the fibrosis of the vein walls, but the damaged valves permit stagnation. Profound pathologic changes will eventually occur in the superficial tissues of the leg as a result of the chronic edema and malnutrition. A chronic lymphedema and increasing fibrosis inevitably appear.

The symptoms of varices are variable and not dependent upon the size of the veins. They may be minimal to absent on bed rest. Usually there is heaviness of the limb and swelling. Pain in a vein is a fairly common complaint. Recurrent thrombophlebitis, eczema and ulcers in the lower leg are complications which will occur. One must

be careful in advising treatment of varicosities for cosmetic reasons, since some of these patients will be disappointed. Occasionally cardiac deficiencies will be aggravated by large varicosities. In certain obese individuals the veins will not be apparent on inspection, but they will be demonstrated to skilled palpation and ballottement.

A complete physical examination must be made with special emphasis on the chest, abdomen and pelvis. Special care must be taken when there has preceded a story of phlegmasia alba dolens. If the deep circulation is patent, relief from subjective symptoms occurs when proper-fitting elastic support to the extremity is applied. This test may be made with elastic stockings or bandages. The Perthes' test is a test of the deep circulation. The usual application of this test is to stand the patient, apply a tourniquet at the groin and have the patient walk back and forth. If the veins empty or become softer, the deep circulation is functioning. The Trendelenburg test and other various tests previously employed to determine competency of the valves of the long saphenous and communicating veins are of lesser importance when the radical removal of varicosities is carried out.

Extirpation of the saphenous vein or stripping of varicose veins is not a new procedure.^{9, 10, 11} It has been employed by many surgeons over a long period of time and has again recently gained much favor.^{12, 13, 14} Circular incisions or multiple ligations, with or without the injections of sclerosing solutions in the veins, have given poor results in many patients. Better results have been obtained by the more radical removal of the varicosities. In the past this procedure has rarely been advised because of the prolonged hospitalization and convalescence and the presumed added risk of emboli or other complications. A study of the results in 77 patients treated over a two year period, ending December 1948, seems to justify the following procedure:

The Operative Procedure

The course of the veins is carefully studied immediately before operation. A general anesthetic is administered. The lower abdomen, pubis, groin and one or both extremities are prepared with antiseptic agents and draped in an acceptable position.

The saphenous fossa structures are exposed through an oblique incision in the crease of the groin, 8 to 10 cm. in length and directly over the pulsation of the femoral artery. By placing the incision somewhat medial, a better exposure of the saphenofemoral junction is made and the dissection of the veins is facilitated. By sharp and blunt dissection through the superficial fascia, all

high tributaries of the saphenous vein are identified, divided and ligated. One looks for the superficial inferior epigastric vein, superficial circumflex vein, superficial external pudendal vein, lateral superficial femoral vein, medial superficial femoral vein and the long saphenous vein. The saphenous vein is divided and ligated close to the saphenofemoral junction to prevent possible thrombus or embolus formation in the short stump. The proximal stump is tied and suture-ligated distal to the tie to prevent the ligature from blowing off.

A second incision is made over the long saphenous just above the internal malleolus and along the posterior border of the tibia. Care is taken not to injure the saphenous nerve, which is closely related to the vein, since injury produces anesthesia on the medial and dorsal aspect of the foot. The vein is divided and the distal end ligated. A vein-stripper made of sterling silver wire with an olive tip is threaded the entire length of the saphenous vein to the groin incision. The proximal end of the vein is tied to the stripper and the vein stripped in a retrograde fashion.

As the stripper is pulled down, if it meets with resistance, direct pressure over the skin will usually rupture the incoming branch, and one may continue with the vein extraction. Occasionally the vein may be torn as it is being extracted, especially just above or below the knee, and under these circumstances a third or fourth incision will be required.

Of great importance is the removal of the main saphenous and its incompetent communications. Stripping may be impossible if the vein is tortuous, friable, scarred or occluded part-way along its course with a thrombus. When this is true, the varicosities are removed by evulsion or by blunt dissection and evulsion. If the lesser saphenous vein is involved, the vein is ligated in the popliteal fossa and elsewhere if indicated. Areas of recent superficial thrombophlebitis should be excised. All incisions are closed with interrupted silk sutures. Sterile gauze squares are taped over the wounds, and the entire extremity from the toes to the groin is snugly wrapped with an elastic pressure bandage. Bleeding is controlled by the pressure dressing.

Active exercise is encouraged in bed after recovery from the anesthetic. The patients are urged up and out of bed the evening of the day of surgery or the following day. The patient may be discharged on the second or subsequent day. The skin sutures in the groin are removed on the fourth day and those in the leg on the ninth day. The elastic bandage dressings are worn for several days.

Postoperatively, a varying amount of hemorrhages occurs in the vein tracts. This produces the usual subcutaneous hemorrhagic discoloration and tenderness but has never produced a serious complication. Hemorrhage from the wound, infection or even the drainage of serum has not occurred. If residual varices remain, they may be subsequently excised or occasionally treated by sclerosing chemicals. Deep phlebitis, pulmonary infarction or pulmonary embolism has not occurred.

While more serious pathologic conditions may require treatment first, there are no contraindications to the removal of varicose veins by this method. Edema, stasis dermatitis and even ulcers, if present, may not require treatment before operation. Acute cellulitis, lymphangitis, etc., require supportive therapy and bed rest prior to surgery. Areas of superficial phlebitis respond well to early local excision at the time of removal of additional varices. Pregnant patients may be operated upon with expectant good results and the subsequent saving of the limbs.

An Analysis of Cases

In a two year period ending in December 1948, 77 patients were treated by extirpation of the saphenous vein. There were more females than males, and all had symptoms related to their varicosities. Edema of the lower leg, ankle and foot was present in 31 patients. Ulcers were present in 11 patients. Ten of the patients were pregnant. Acute superficial phlebitis was present in 8 patients. Twenty of the patients had had previous surgical treatment, including injections of sclerosing agents. They were hospitalized from 2 to 90 days, with the majority being discharged on the fifth day. Sixty-six per cent were greatly improved; 24 per cent were moderately improved; and 10 per cent were classified as a poor result. In 2 patients the ulcers failed to remain healed. No complications arose with the patients who were pregnant. Residual varicosities were noted in 20 patients, some of whom have required additional treatment. The best results appeared in the younger patients, although it is believed that recurrences are more likely to appear in the young patients than in the elderly individual. Because of the known tendency for recurrences, it is advisable to check these patients at 6 to 12 month intervals. There has been no operative mortality and no known late mortality from the procedure or from complications of the varicose veins. The results are definitely better than the results of previously used methods.

Not all varicosities are treated by the above described method. In an occasional patient injections alone, or high saphenous ligation alone, or

with subsequent injections, is used. Likewise, high saphenous ligation plus ligation of the communicating veins is occasionally performed. Recently the tendency has been to extend the extirpation of the saphenous to include all patients.

Conclusion

The surgical extirpation of the saphenous venous system is an effective method of treating a certain group of patients with varicose veins. It appears to be more effective than ligations or injections alone or in combination. Although the operation is of greater magnitude than most methods of treatment, the period of hospitalization is not great and the mortality is low. Because of the known tendency for new varicosities to appear, and since no truly satisfactory method has heretofore been used, it seems advisable to follow indefinitely all patients who have been treated in this manner before a final appraisal can be made.

BIBLIOGRAPHY

1. Lawrence, E. D.: Ligation treatment for varicose veins; estimate of present status of this method. *J. Internat. Coll. Surgeons*, ix:370-376 (May-June) 1946.
2. de Takáts, G.: Ambulatory ligation of saphenous vein. *J.A.M.A.*, xciv:1194-1197 (April 19) 1930.
3. de Takáts, G.; and Guillin, L.: Ligation of saphenous vein; report on 200 ambulatory operations. *Arch.Surg.*, xxvi:72-88 (January) 1933.
4. Theis, F. V.: Symposium on minor surgery; varicose veins and ulcers. *S.Clin.North America*, xxviii:134-153 (February) 1948.
5. Dean, G. O.; and Dulin, J. W.: Treatment of varicose veins. *Arch.Surg.*, xxxix:711-719 (November) 1939.
6. Schneider, N. A.: Modified ligation operation for obliterating varicose veins. *South. M. J.*, xl:896-897 (November) 1947.
7. Foote, R. R.: Bandage in varicose conditions. *The Practitioner*, clviii:60-66 (January) 1947.
8. Kampmeier, O. J.; and Birch, L. F.: Origin and development of venous valves, with particular reference to saphenous district. *Am.J.Anat.*, xxxviii:451-499 (January) 1927.
9. Babcock, W. W.: New operation for extirpation of varicose veins of leg. *New York Med. J.*, lxxxvi:153-156 (July 27) 1907.
10. Homans, J.: Operative treatment of varicose veins and ulcers, based upon classification of these lesions. *Surg.,Gynec.& Obst.*, xxii:143-158 (February) 1916.
11. Keller, W. L.: Combined extirpation and obliteration in treatment of varicose veins. *Ann.Surg.*, lxxix:907-912 (June) 1924.
12. Tanner, E. K.; and Field, W. H.: Operative treatment of varicose veins. *S.Clin.North America*, vii:1103-1108 (August) 1927.
13. Horgan, E.: Varicose veins, with special reference to treatment by ligation, stripping and injection. *Surgery*, iii: 528-533 (April) 1938.
14. Hodge, G. B.; Grimson, K. S.; and Schiebel, H. M.: Treatment of varicose veins by stripping, excision and evulsion. *Ann. Surg.*, cxxi:737-750 (May) 1945. Also in *Tr. South S. A.* (1944), lvi:353-366, 1945.
15. Summers, J. E.: Technique of operation for varicose veins. *Am. J. Surg.*, lxxvi:72-75 (July) 1948.

OUTPATIENT CLINIC AT INDEPENDENCE

Since November 2 a new outpatient clinic has been in operation at the State Hospital at Independence. Open every Wednesday afternoon, the clinic is part of the program for examining persons on a voluntary, fee basis. Persons will be accepted on appointment only and must be accompanied by a close friend or relative. A nominal fee will be charged based on the individual's ability to pay, but no one will be turned away because of lack of funds.

Two doctors, two psychologists, one psychiatrist and several social workers will be on duty at the new clinic. Those who volunteer will be given both a physical and psychiatric examination.

ANGIOCADIOGRAPHY

Philip G. Keil, M.D., Chris A. Voelker, M.D., and Donald J. Schissel, M.D., Des Moines

The term *angiocardiology* implies the introduction of a radiopaque substance into the circulating blood and roentgenographic visualization of this material within the heart and blood vessels.

Forssman,^{1,2} in 1931, was the first to attempt this procedure. He introduced a ureteral catheter into his own right atrium and injected an iodized oil, but he was unsuccessful in demonstrating the right heart and pulmonary trunks. The same year Moniz³ succeeded in obtaining roentgenograms of the major venous trunks, right atrium and ventricle and the pulmonary arterial tree. Robb and Steinberg,⁴ in 1938, simplified the procedure by utilizing a direct injection into an antecubital vein, obviating the necessity for the cardiac catheter in routine angiography.

Improved technics have since led to the establishment of definite diagnostic criteria for diseases involving the mediastinal structures, and knowledge of the mechanics of the circulation has been augmented.

Angiocardiography is of value in the proper identification of certain mediastinal tumors of vascular origin which cannot be differentiated in any other way from neoplasms. The localization of anatomic defects, that is, congenital cardiac malformations and arteriovenous fistulas, is also best accomplished by contrast visualization. Of almost equal import is the study of selective chamber enlargement in acquired cardiac lesions. The method is diagnostic of pericardial effusion.

Technic

Diodrast is radiopaque (but not radioactive) and manifests itself as a shadow of increased density on the roentgen film. Although we have used 70 per cent diodrast in most instances, 75 per cent neo-iopax is equally effective.

The patient is positioned for a posteroanterior projection of the chest while sitting before a specially constructed multiple cassette device for rapid serial exposures. The target film distance is six feet. The exposure factor found satisfactory is simply an increase of 10 kilovolts over the exposure normally used for plain film study.

Using a 13 gauge needle, 50 cc. of diodrast are injected into an antecubital vein in one to two seconds. The stream of diodrast fills first the arm vein and superior vena cava, becoming more dilute as it becomes admixed with blood. The first film exposure is made at two seconds when

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the right heart and pulmonary arterial tree are filled. Routinely, three more exposures are made at successive two second intervals. The four and six second films ordinarily show the left atrium and ventricle, and the eight second film the aorta and major arterial trunks (innominate, carotids and subclavians). Severe circulatory impairment will, of course, delay the exposure time and may be roughly estimated by arm-lung and arm-tongue circulation time.

The posteroanterior projection is used for the superior and inferior vena cava, right heart and pulmonary arteries and their ramifications. Optimal visualization of the aorta is obtained in the left anterior oblique position. Certain other special views may be required, but these must be individualized.

The "angiography team" consists of three technicians and two physicians. This number can be reduced to one or two technicians and one physician if the ordinary stereocassette changer is used. The disadvantage, though not great, is in the limitation of the number of exposures.



Fig. 1. Organic obstruction of the axillary and subclavian vein (thrombophlebitis), with extensive retrograde venous filling.

Toxic Effects and Contraindications

Reactions are minimal. The patient experiences a sensation of heat which becomes apparent a few seconds after the injection, disseminates rapidly and lasts a minute or two. A transient drop in systolic blood pressure occurs. Nausea is not uncommon, but vomiting is rare. We have experienced no severe or delayed reactions. Ambulant patients are permitted to walk to their rooms a few minutes after completion of the procedure unless pyelograms are desired.

Hyperthyroidism, nephritis, severe hepatic disease and circulatory failure are said to contraindicate the procedure. We have seen no ill

effects in patients with advanced hydraulic failure. Active tuberculosis does not contraindicate angiography.

Clinical Applications

Peripheral angiography (venography and arteriography).—This procedure is most useful in

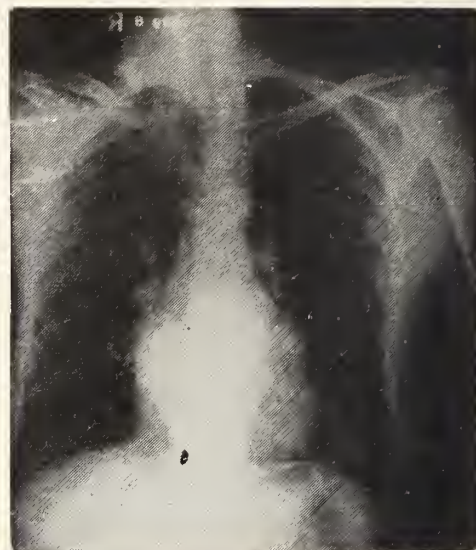


Fig. 2. Mitral stenosis showing an enlarged left atrium.

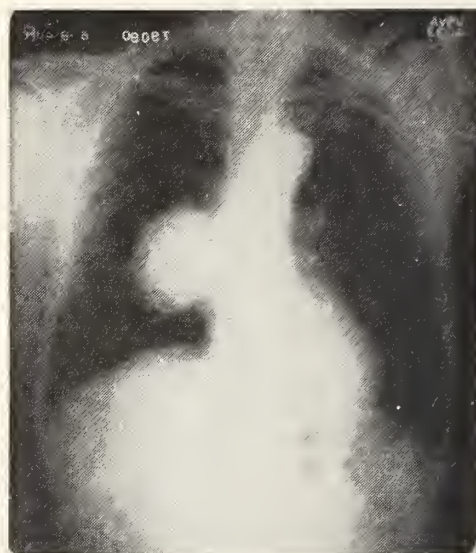


Fig. 3. Aneurysm, proximal ascending aorta, diodrast filled. The lesion was originally thought to be a benign neoplasm.

cases of organic obstruction of larger vascular channels by intrinsic disease or extrinsic pressure. (figure 1.) The localization and extent of arteriovenous fistulas can be accurately determined. Recent reports indicate a considerable enthusiasm on the part of some workers in visualizing the deep venous channels of the lower extremities to determine their patency in extensive superficial varicosities.

Cardiography.—Contrast visualization is of

value in determining the extent of enlargement (dilatation and hypertrophy) of the cardiac chambers in congenital and acquired lesions. (figure 2.) We have made a practice of performing this study on all cases in which the routine chest film reveals a cardiac silhouette which deviates from normal. Mediastinal tumors of vascular origin

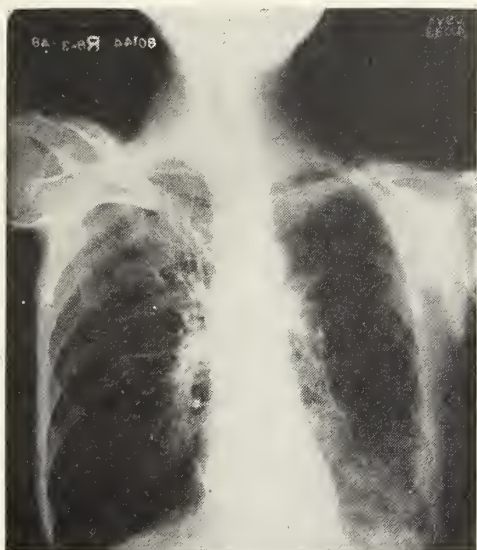


Fig. 4. Carcinoma, left upper lobe, with compensatory emphysema, left upper lobe, and atelectasis, left lower lobe. The superior branch of the left pulmonary artery shows complete obstruction by tumor mass.

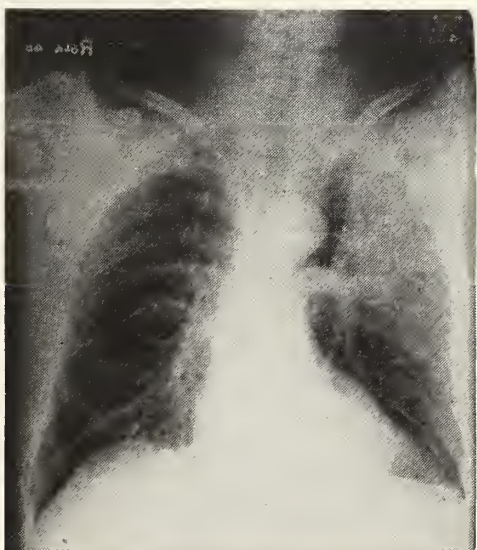


Fig. 5. Bronchial carcinoma, left upper lobe, with diminished vascularity of the entire left upper lobe. The lesion was resectable.

(figure 3) can be definitely distinguished from those of neoplastic nature, i.e. aneurysm versus mediastinal lymphosarcoma, substernal thyroid, thymoma and other benign tumors. Angiography is diagnostic in pericardial effusion and may be useful in the diagnosis of constrictive pericarditis.

Pulmonary arteriography.—This is the least explored field in angiography today, though Robb

and Steinberg predicted in 1939 the possibility that deviation from the normal vascular pattern of the lung could be worked out for pulmonary disease. We⁵ have found decreased vascularity of a portion of lung parenchyma distal to a carcinoma to be a constant finding (figures 4 and 5). This sign is present in even the earliest carcinoma, which may be so located that it defies other diagnostic approaches.

Retraction of the pulmonary arterial trunks is common in fibrosing lesions of the apexes. Diminished vascularity is seen in emphysema and in cystic disease of the lung. Increased vascularity may be present in acute inflammatory lesions.

Dilatation of the pulmonary trunks and conus is apparent in asthma and emphysema and sometimes in extensive fibrotic tuberculosis, denoting increased peripheral resistance to the flow of blood. Bulging of the interventricular septum to the left,⁶ which normally shows a convexity toward the right (toward the side of lower pressure), is said to be an almost constant finding in chronic cor pulmonale.



Fig. 6. Aneurysm, abdominal aorta, just below diaphragm. The entire aorta can be outlined. The aneurysm subsequently ruptured.

Aortography.—There are two methods of approach, the direct and the indirect. Contrast may be accomplished by direct puncture of the aorta⁷ at the transverse arch or just below the diaphragm through a posterior approach just inferior to the left twelfth rib. Retrograde filling has been accomplished through the carotid or femoral,⁸ with or without the use of a catheter. The indirect method (antecubital vein injection) is much less difficult and safer and usually suffices in outlining aneurysms even as far distalward as the aortic bifurcation (figure 6), aneurysm of large branches, right-sided aortic arch and coarctation. Obstruc-

tion or displacement by tumor mass may be visualized, and the location and extent determined.

Summary

Angiocardiography has a definite place in roentgenographic diagnosis. It is of particular value in determining the type and extent of congenital cardiac lesions and in the differentiation of mediastinal tumors.

The entire major circulation can be outlined, using an intravenous injection of dye and rapid serial roentgen filming.

Toxic manifestations are minimal and nonconsequential.

Discussion

Daniel J. Glomset, M.D., Des Moines: Every live clinician seeks constantly to sharpen his diagnostic acumen and to improve his therapeutics. At the Veterans Hospital, the doctors are kept alive by having frequent opportunities to see themselves as the pathologists see them. This intimate association with the morbid anatomists has made us of the medical department allergic to bronchogenic carcinoma. This hypersensitivity on our part has been maintained and enhanced by the fact that we have on our staff an able thoracic surgeon who is constantly going around to our wards grumbling because we give him a chance to do too little and too late for cancer of the lung. It was this state of affairs which led Dr. Keil, Dr. Schissel and Dr. Voelker to institute angiography at our institution.

Dr. Keil's talk and slides speak for themselves and are, I think, very clear. I would like to give my own impressions about this new diagnostic procedure. I say it is new; it is new in this part of the country, anyhow. As Dr. Keil has indicated, it is a relatively innocuous procedure; at least it has been so in our hands. There is a report in the literature of an individual who has done 1,600 such opaque injections without any serious untoward effects. However, there are some serious consequences which at times will follow.

The second point I wish to make is that, according to Keil and his collaborators, any group of interested physicians can group themselves together and, if they have available a standard type of x-ray equipment, they can carry out this valuable diagnostic procedure.

I have been, of course, particularly interested in the excellent visualization which we obtained of the cardiac chambers and of the vessels and of tumors containing blood. The right side of the heart, the right atrium, the right ventricle and the conus arteriosus, all show up beautifully on the slides. Certainly it is possible to see here whether or not these cavities are dilated, whether there are any abnormalities within them such as atresia. Also, in case there should be congenital defects in the septa, these are revealed in the early films.

In the six second film or later the left part of the heart shows up very well indeed. We have many beautiful films showing the enlargement of

the left atrium. It is interesting to us to see that the left atrium actually extends over to the right side of the cardiac silhouette. Of course, one can also quite accurately determine whether the left ventricle is dilated, whether or not aneurysm is present in the left ventricle. Coarctation of the aorta can be detected as well as a present ductus.

So far as the aneurysms are concerned, again, you can see how beautifully they are outlined. The diagnostic value of distinguishing between an aneurysm and another form of tumor is, to me, perfectly apparent.

The procedure, so far as we have had experience with it, is a valuable one. It helps in the diagnosis of intricate problems dealing with lung pathology and with these aneurysms. I feel that this method is of sufficient value to be used in all the hospitals in Iowa that are properly equipped for carrying it out.

BIBLIOGRAPHY

1. Forssmann, W.: Die Sondierung des rechten Herzens. *Klin. Wehnschr.*, viii:2085-2087 (Nov. 5) 1929.
2. Forssmann, W.: Ueber Kontrastdarstellung der Höhlen des lebenden rechten Herzens und der Lungenschlagader. *München. med. Wehnschr.*, lxxviii:489-492 (March 20) 1931.
3. Egas Moniz; Lopo de Carvalho; and Almeida Lima: Angiopneumographie. *Presse med.*, xxxix:996-999 (July 4) 1931.
4. a. Steinberg, I.; and Robb, G. P.: Mediastinal and hilar angiography in pulmonary disease; preliminary report. *Am. Rev. Tuberc.*, xxxviii:557-569 (November) 1938.
b. Robb, G. P.; and Steinberg, I.: Visualization of chambers of the heart, pulmonary circulation, and great blood vessels in man; practical method. *Am. J. Roentgenol.*, xli:1-17 (January) 1939.
5. Keil, P. G.; Voelker, C. A.; and Schissel, D. J.: Pulmonary Arteriography in Bronchial Carcinoma. *Am. J. M. Sc.*, In press.
6. Sussman, M. L.; and Grishman, A.: Discussion of angiocardiology in Dock, W.; Snapper, I.; and others, editors: *Advances in Internal Medicine*. New York, Interscience Publishers, Inc., 1947, vol. 2.
7. Wagner, F. B.: Abdominal aortography. (N. Y. Roentgen Soc. Nov. 1946.)
8. Farinas, P. L.: Differential diagnosis of bone tumors of extremities by arteriography. *Radiology*, xxix:29-32 (July) 1937.
New Technic for arteriographic examination of abdominal aorta and its branches. *Am. J. Roentgenol.*, xli:641-645 (November) 1941.

MEDICAL TREATMENT OF THYROTOXICOSIS

Hyman M. Hurevitz, M.D., Davenport

Thyrototoxicosis is a complicated syndrome, the exact etiology of which is unknown. Certain associated features can, however, be described. The relationship of the function of the thyroid with the other endocrine glands, particularly the anterior pituitary, has been established. In fact, the production of thyroid hyperplasia by the thyrotropic hormone of the pituitary gland, as described by Loeb and Bassett¹ in 1929, is to be considered one of the milestones in the attempts to solve the mystery of the etiology of goiter. It has long been recognized that the syndrome may be precipitated by emotional factors in those individuals who have pre-existing unbalance of the autonomic nervous system. This nervous system instability is an almost universal feature in individuals with thyrototoxicosis. In the light of our present knowledge, therefore, any therapeutic at-

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tack does not remove the cause but must be considered of a palliative nature with the ever-present possibility of a recurrence.

As a note of encouragement it may be added that the rapidly increasing knowledge which is accumulating as a result of the discovery of the thiourea derivatives and the use of radioactive iodine may, within a relatively short time, bring a specific curative agent for the disease and make entirely obsolete anything which we have today.

Diagnosis

In spite of intricate biochemical advances, the diagnosis of overactivity of the thyroid is still largely a clinical process. The changes in the thyroid gland affect the function of all the tissues of the body, producing a group of clinical manifestations that cannot be mistaken in the typical case. The history of increasing irritability, restlessness, weight loss in spite of increase in caloric intake, heat intolerance, fatigue and heart consciousness are quite characteristic. Add to this the typical stare with exophthalmos, the warm moist skin, thyroid enlargement, the fine rhythmic tremor, a bruit over the thyroid, the rapid forceful heart beat with occasional auricular fibrillation, and there is a clinical picture that needs no further confirmation.

In the atypical case special laboratory studies are essential. This is particularly true in the individual who has the disease in an insipient form or in the so-called "masked type" of hyperthyroidism that occurs most commonly in the older age group and where the manifestations are referred largely to the cardiovascular system. In such instances estimation of the oxygen consumption by the basal metabolic rate will be helpful. The blood cholesterol is lowered in some cases, but the changes are not sufficiently uniform to be of much value in diagnosis. The estimation of blood iodine, when it can be carried out, is of definite aid, but the procedure is too difficult for routine use. The more recent tests concern the use of radioactive iodine. These consist of the measurement of the excretion of labeled iodine following the administration of a standardized tracer dose, the detection of the location of administered radioiodine by means of the Geiger-Müller counter, and the use of the autoradiogram, which is a photoprint of a section of tissue containing the radioactive material.² It is of interest to those of us in Iowa that the late Dr. Mayo H. Soley had an active part in the pioneer research of this subject.³

At the present time we have three methods of treatment at our disposal: the classic thyroidectomy after suitable preparation with either iodides or thiourea derivatives, the prolonged use of goi-

terogenic drugs without surgery, and the employment of radioactive iodine.

Prior to 1923 the treatment was a subtotal thyroidectomy, often in two stages, after extended preoperative preparation with rest and sedatives. The number of cases that could not be prepared for surgery was fairly high, and the operative mortality was not particularly enviable. In short, the surgeon dreaded the severe hyperthyroid, and the medical man had little to offer except rest, sedation and x-ray treatment. The reintroduction of iodine by H. S. Plummer⁴ provided a tremendous advance and quickly decreased the mortality of subtotal thyroidectomy to a respectable figure, until the surgeon was able to talk about mortality rates of around 1 per cent.

The exact mechanism of iodine reaction is not known, but it exerts a direct effect upon the secretory activities of the thyroid gland, causing a diminution in the output of the thyroid hormone. The maximum effect is noted in ten days to three weeks, following which a thyroidectomy may be performed with relative safety. Iodine has definite shortcomings. An occasional case of severe thyrotoxicosis cannot be brought under adequate control with iodine. Some individuals have an iodine sensitivity, and we find the occasional patient who, because of a previous extended period of iodine medication, becomes "iodine fast." The drug may have little effect in toxic adenoma with secondary hyperthyroidism. Except for the mild case a permanent remission with iodine is rarely seen.

During the past six years since the introduction of the goiterogenic drugs by Astwood⁵ a voluminous literature continues to verify the value of this new advance in the treatment of thyrotoxicosis. It is not the purpose of this paper to review in detail these reports but rather to summarize the practical aspects of these new therapeutic agents in relation to our everyday practice. Astwood first reported on the use of thiourea and thiouracil. Because of the relatively high toxic reactions, many other related compounds were investigated by Astwood,⁶ and in 1946 he introduced propylthiouracil. This is the drug of choice up to the present writing.

The thiourea group of drugs inhibit the synthesis of thyroxine. This produces an increase in the secretion of the pituitary thyrotropic hormone, resulting in hyperplasia and increased hyperemia of the thyroid gland. As will be noted later, the fact that the thyroid becomes enlarged must be taken into consideration when these drugs are used.

Toxicity of Propylthiouracil

Significant toxic reactions to propylthiouracil appear to be uncommon. This statement is not

made to produce complacency on the part of the physician who is prescribing it. It is a potentially dangerous drug, yet out of many thousands of cases reported in the literature only three instances of agranulocytosis, which is the most serious complication, have been recorded, and there have been no reported deaths.⁷ In addition, leukopenia, fever, urticaria, pruritis, lymphadenopathy and headache have been reported. The development of fever and/or a sore throat should arouse suspicion that agranulocytosis may be developing. It is suggested also that a leukocyte count of less than 4,000 is an indication for stopping treatment.

A group of adverse symptoms may occur as a result of overdosage which is not related to drug sensitivity. This is due to the development of myxedema and is manifested by undue weakness, weight gain and a general feeling of sluggishness. It is promptly relieved by decreasing the dose and, if necessary, the administration of thyroid substance.

Treatment

According to Bartells,⁸ no patient failed to respond if a suitable dose of propylthiouracil were given over a sufficient length of time. Should it fail, one is forced to conclude that the diagnosis is in error, and some other cause for the symptoms must be found. Bartells' experience at the Lahey Clinic also indicated that a definite rate of response may be predicted if an adequate dose is given. He states that the basal metabolic rate will decrease about 1 per cent per day in primary hyperthyroidism and about 0.5 per cent per day in secondary hyperthyroidism with adenoma.

The average initial dose is 200 to 300 mg. per day, but larger doses may be required. As the patient is brought under control, the dosage must be adjusted. For prolonged treatment the need for an increase in the amount of drug will occur during the course of acute infection or emotional upsets. Just as the dose of insulin in the diabetic varies from time to time so the amount of propylthiouracil will require modification as the need arises.

In general it is agreed that subtotal thyroidectomy is the treatment of choice in the following: substernal goiters where the pressure symptoms due to further enlargement of the gland with prolonged use of goiterogenic drugs might prove hazardous, in all cases of nodular goiters because of the likelihood, although remote, of malignant changes, those cases showing a reaction to the drug, in individuals who are not sufficiently reliable to be kept under observation and those who object to the relatively long period of treatment. The mortality rate of surgical treatment of hyperthyroidism following adequate preparation with

propylthiouracil is now almost at the vanishing point.

Lasting remissions are obtained in 80 to 90 per cent of cases, following subtotal thyroidectomy. This is compared to a remission rate averaging about 50 per cent in patients treated with thiourea derivatives alone.

No patient should be operated upon unless the basal metabolic rate is normal and all hyperthyroid manifestations have been brought under control. This may take anywhere from one to three months. If the patient has a complicating heart failure, it may be necessary to keep the case under full medical control for several months in order that the operative risk may be minimal. Inasmuch as the thyroid gland increases in friability and vascularity following the administration of thiourea derivatives, iodides should be administered for a period of two or three weeks prior to surgery. Another point that is emphasized in the literature is the danger of overtreating the patient prior to operation. The resultant myxedema introduces a serious hazard during the operative and postoperative period.

Since the introduction of propylthiouracil many patients may be controlled without surgery. Medical treatment alone is to be considered in the following: individuals with a relatively mild degree of hyperthyroidism, those having persistent or recurring symptoms of hyperthyroidism after surgery, patients with cardiac decompensation due to superimposed hypermetabolism on pre-existing heart disease, cases with thyrotoxicosis having little thyroid enlargement and those who have diabetes, advanced arteriosclerosis or any other associated chronic disease where the surgical risk is prohibitive.

Adolescent children are best carried on medical treatment largely because growth and development of the child and his emotional stability are better controlled if the thyroid gland can be kept intact.¹⁰

Most investigators find that a permanent remission is unlikely unless the basal metabolic rate is maintained at a normal level for a minimum of 9 months and probably 18 months. Occasionally it is a good plan to start iodides along with propylthiouracil in order to eliminate the bruit due to the increasing vascularity of the gland.

The question will come up whether propylthiouracil should be used when thyrotoxicosis is present during pregnancy. The early fears concerning the danger of these drugs has not been justified.⁹ Barr reported 14 cases in which there was no evidence of thyroid enlargement in the infant. It is a good plan to give the mother Lugols solution for two to three weeks prior to the delivery.

Radioactive Iodine

Hertz and Roberts¹¹ and Hamilton and Soley¹² were among the first to demonstrate the use of radioactive iodine both in the study and treatment of thyroid diseases. The use of the radioactive isotopes is based upon the fact that the normal thyroid gland takes up about 20 per cent of an ingested dose of iodine while the hyperactive gland will collect about 80 per cent. No other tissues in the body, apparently, take up the radioactive material, and the amount not absorbed is excreted by the kidney. This radioactive material has a destructive action on the thyroid tissue, thus alleviating the symptoms of hypermetabolism. If there were no danger associated with use of this substance, it would indeed be a most advantageous form of treatment. From the patients' point of view it is extremely simple. One or two doses of a nearly tasteless watery solution taken in the physician's office without the necessity of frequent check-ups would be quite ideal if it were not for the possible disadvantage of the treatment. Long-term effects of radioiodine, which include the possibility of malignant changes, irradiation nephrosis and pulmonary fibrosis, will take some years to evaluate. For this reason this type of therapy must be limited largely to the older age group where the life expectancy eliminates this danger. Also, because of the danger to the individual handling the material and the necessity for complicated equipment for measuring the dose, this type of therapy is at present available only in large medical centers where there are trained personnel who act as a team both in the handling of the material and the evaluation of the treatment.

Roentgen Therapy

This type of treatment has been largely used in the past, but at the present time because of the newer developments it has a limited place. X-Ray treatment is justified, however, in the bad risk patient who is sensitive to the thiourea derivatives and to iodine and for whom radioactive iodine is not available.

Regardless of the form of treatment which is chosen for the particular patient, certain well established general measures remain as important features. Adequate correction of nutritional difficulties, which are so often a part of the disease, must not be neglected. A diet supplying up to 4,000 calories a day is frequently necessary. Sedation should be prescribed when necessary to overcome restlessness and sleeplessness. Cardiovascular disease, diabetes and other complicating disorders should be treated as indicated. Psychotherapy continues to hold an important place in the treatment of thyrotoxicosis. The importance of a sympathetic attitude toward the patient's

problem with reassurance and encouragement cannot be overemphasized. As newer scientific developments come up in the treatment of this disease, there may be a tendency to forget that we must still treat the patient as a whole and not only his thyroid gland.

Summary

The exact etiology of thyrotoxicosis has not been established, but the relationship of the anterior pituitary and the autonomic nervous system appears to be quite definite. The three methods of treatment available at the present time include thyroidectomy following suitable preparation with either iodides or thiourea derivatives, the prolonged use of thiourea derivatives without surgery and the employment of radioactive iodine. Of the thiourea derivatives propylthiouracil is the drug of choice because of the low incidence of serious toxic reactions. Since the introduction of this drug many patients can now be controlled by medical treatment alone. Surgery, however, should be employed in the substernal thyroid, in all nodular goiters and in all instances where the patient is not sufficiently reliable to be kept under observation. This new group of drugs has not entirely replaced the use of iodine. The latter may still be used in occasional cases without propylthiouracil and is to be considered as an essential adjunct with propylthiouracil prior to surgery and occasionally when the patient is being controlled by medical treatment alone.

The use of radioactive iodine is as yet limited to the large medical centers where adequately trained personnel are in charge.

It is emphasized that the newer methods of treatment of thyrotoxicosis do not supplant the general treatment of the patients as a whole.

BIBLIOGRAPHY

1. Cole, W. H.: Editorial, Progress and future in treatment of goiter. *Surgery*, xvi:811-814 (November) 1944.
2. Means, J. H.: Use of radioactive iodine in diagnosis and treatment of thyroid diseases. *Bull. New York Acad. Med.*, xxiv:273-286 (May) 1948.
3. Hamilton, J. G.; and Soley, M. H.: Studies in iodine metabolism of thyroid gland in situ by use of radioactive iodine in normal subjects and in patients with various types of goiter. *Am. J. Physiol.*, cxxxi:135-143 (November) 1940.
4. Plummer, H. S.: Results of administering iodine to patients having exophthalmic goiter. *J.A.M.A.*, lxxx:1955 (June 30) 1923.
5. Astwood, E. B.: Treatment of hyperthyroidism with thiourea and thiouracil. *J.A.M.A.*, cxlii:78-81 (May 8) 1943.
6. Astwood, E. B.; and Vanderlaan, W. P.: Treatment of hyperthyroidism with propylthiouracil. *Ann. Int. Med.*, xxv:813-821 (November) 1946.
7. Bartels, E. C.: Agranulocytosis during propylthiouracil therapy. *Am. J. Med.*, v:48-52 (July) 1948.
8. Bartels, E. C.: Propylthiouracil: its use in preoperative treatment of severe complicated hyperthyroidism. *Trans. Am. Assoc. Goiter*, p. 89-98, 1947. Also in *West. J. Surg.*, lvi:226-235 (April) 1948.
9. Farr, D. P.: Critical evaluation of thiouracil and newer related compounds in treatment of thyroid disease. *Bull. New York Acad. Med.*, xxiv:287-299 (May) 1948.
10. Sexton, D. L.: Medical management of hyperthyroidism. *Postgrad. Med.*, iv:224-230 (September) 1948.
11. Soley, M. H. and Miller, E. R.: Treatment of Graves' disease with radioactive iodine. *M.Clin.North America*, xxxii:3-17 (January) 1948.
12. Hertz, S.; and Roberts, A.: Radioactive iodine in study of thyroid physiology; use of radioactive iodine therapy in hyperthyroidism. *J.A.M.A.*, cxxxi:81-86 (May 11) 1946.

EVALUATION OF THE DIAGNOSIS AND TREATMENT OF EXTERNAL OTITIS

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The term *external otitis* embraces an extensive list of varied dermatopathic conditions including trauma, infections and degenerative lesions. Of the numerous types of external otitis, the diffuse inflammations and particularly the degenerative manifestations constitute the most perplexing problems therapeutically. These conditions are encountered in practice by reason of their aggravating, if not painful, character. While not unduly serious in nature they are nevertheless sometimes incapacitating and often tax the clinical ingenuity of the physician. It is quite obvious, moreover, that such otopathies have not reached the level of diagnostic and therapeutic fixation for which ascription has been made by some observers. Every otologist has his favorite prescription for the treatment of various conditions of the external auditory canal which he feels excels all others in therapeutic value. This belief, often registered in terms of deceiving statistics, suggests that a generally common and essential factor has been omitted in calculating the results. This factor is really the common denominator in the therapeutic equation, and its omission alters any therapeutic calculation of otitic management. The common denominator is revealed in fundamental principles governing the management of wounds which provide for adequate drainage and evacuation of morbid accumulations. While these are desirable objectives in the management of external otitic diseases, the most diligent efforts often fail to bring about complete success.

A critical evaluation of the various substances used in treatment will reveal that many assumed inhibitors or destroyers of offending organisms actually possess little such power.^{1, 2} This is illustrated by indiscriminate claims which appear to give to a variety of drugs essentially the same clinical value. The literature attests to the fact that one group of patients will progress as favorably under one therapeutic regime as under another provided the debris is always carefully and thoroughly removed. Considering this provision it becomes clear why some therapists may use different forms or preparations of antiseptics, antibiotics, astringents or perhaps nothing more than a mild ointment, and achieve satisfactory, if not the best, results.^{3, 4, 5, 6}

Of course, there is no panacea according to which the hydra-headed problem of external otitis may be solved completely, but Senturia⁷ and his associates, at Randolph Field, Texas, almost simultaneously with Quayle,⁸ of Australia, in 1944,

brought together impressive data which provide a direct and logical approach to this frequently difficult problem. Several others have made similar and in some instances identical observations but have failed to relate them significantly.^{5, 9, 10} The identification of the *Bacillus pyocyaneus* as the pathogen in most cases of acute, chronic and recurrent diffuse external otitis has altered appreciably the perspective of many otologists interested in this work.^{11, 12}

Various fungi have been recovered from the external auditory canal, *Aspergelli*, *Penicillia*, *Mucor* and *Monilia* among them.¹³ Despite efforts to establish the pathogenicity of these organisms, they are still assumed to be the offending agents by some clinicians who continue to regard external otitis as amenable to fungistatic and fungicidal drugs.^{14, 15, 16} This is often apparent and devoid of unequivocal evidence.

In order to provide effective contact between organism and the drug, the therapeutic field must be cleared of obstruction. The removal of accumulations from the external canal not only favors this meeting but discourages multiplication of potential or active pathogens and consequently inhibits further progress of the pathologic process. This phase of management alone accounts for the successes attributed to many drugs.

The external auditory canal varies greatly in size and shape, its tortuosity serving to protect the innermost surfaces and tympanic membrane from direct exposure to external elements. In the deep or osseous portion the skin is thin, without the characteristic structures found externally, except along the external aspect of its upper wall. There and in the outer cartilaginous part sweat glands and hair follicles are abundant. The product of the sebaceous glands is sebum, an element of cerumen, which is chiefly composed of fatty acids. This material and the cellular detritus resulting from the migratory desquamation of the epidermis combine with the hairs to form an annular protective barrier just inside the meatus.¹⁷ However, because of its exposed position to the external environment, the external auditory canal is open to invasion by practically all of the microorganisms common to skin diseases. The excretions of the canal under certain circumstances often serve as an adequate culture medium for the growth of bacteria and fungi.

The structural features of the outer ear canal describe a cul-de-sac poorly ventilated, relatively dark, damp and warm, conditions which favor the culture of implanted organisms. The meatus varies according to certain anatomic peculiarities which may affect appreciably its capacity to provide adequate ventilation of the canal. The form

and disposition of the tragus to the meatus and the anterior edge of the concha determine the natural extent to which a kind of meatal operculum occurs. Some ears exhibit this tragicus overlap to a remarkable degree, and in some individuals it almost closes the aperture. It is to be found with increasing prevalence among obese, elderly people.

A biochemical matter of considerable importance concerns the range of acid-alkaline reaction of the canal surfaces.¹⁸ These areas are covered normally by an acid film, which is of the average order of pH 6.2. It may vary from 5.0 to 7.9. The protective function of the acid mantle is largely dependent on cornified horny cells, whose reaction is more acid than that of any other cutaneous structure.¹⁹ An unfavorable change in susceptibility or resistance to infection may occur if the antibacterial acid mantle is displaced by an abnormally alkaline mantle. It is known that certain bacteria and fungi propagate best in a culture medium of moisture, maceration, necrotic tissue and relative alkalinity. These conditions are pertinent to the subject of choosing an appropriate course of therapeutic management.

A number of other factors weigh heavily upon the discussion of this subject. Self attendance to the principles of hygiene of the ear is always impractical and potentially hazardous. The incipency of most infections of the canal may be traced to attempts of the patient to pick or scratch at irritated areas with objects such as a match stick or hair pin. Few persistent infections of the external canal arise suddenly. There is usually a long preparatory period during which trauma or constant irritation provides the inflammatory bed. Such infections burst into flame from a smoldering cutaneous sensitivity fanned by habitual hygienic indiscretion or perhaps unintentional injury. The fuel is usually the macerated skin or accumulated detritus of long standing, which becomes increasingly receptive to bacterial invasion.

The swimming season is attended by a marked increase in the incidence of external ear infections. The introduction of water into the external auditory canal causes maceration of the skin and lowers its resistance, thus making it vulnerable to infection. The natural but often traumatizing habit of drying the ears after immersion by digitally forcing a cloth or towel into the meatus accounts for the background of many of these infections. Showers, swimming pools and dressing rooms are but a few of the many sources of the organisms found in infected ear canals.

Climate and the seasons of the year exert an adverse influence, etiologically and pathologically,

in these conditions. The severest effects and highest incidence are noted in tropical and subtropical climates and during the summer months in the North. As a general rule in temperate zones gram-positive infections are prevalent in winter and gram-negative infections are more frequent in summer.

Degenerative and debilitating diseases which alter tissue metabolism and general resistance may be preclusive etiologic factors. No approach to diagnosis or therapy can be sound without taking such possibilities into account.

A classification may be rightfully regarded as a series of guide posts by which a writer in discussing a given subject may begin, carry on and end his task. Hence the following classification, while differing but little from numerous others in the literature, contains those categories which have been found to be practical and useful for descriptive purposes and which may serve as a reference for diagnostic and therapeutic orientation. Clinical entities described as erysipelas or erysipeloid, impetigo, herpes, etc., have been omitted intentionally. Differentiation must be made, of course, but they have certain characteristics which separate them distinctly from those classified.

I. External Otitis.

A. Acute.

1. Circumscribed.
2. Diffuse.

B. Chronic.

1. Infectious eczematoid.
 - a. Hyperemic.
 - b. Exudative.
 - c. Granulomatous.
 - d. Desquamative.

Pain characterizes the acute infections, and burning and itching symptomatically reflect the processes of chronic external otitis. The acute infections are relatively sudden in onset; the pain, more often than not, is seemingly out of proportion to the magnitude of the pathology.

The history of symptoms alone does not usually provide the desired differential points between circumscribed otitis externa (furunculosis) and diffuse otitis externa (eczematoid). Inspection of the auricle, the periauricular areas, and otoscopy, however, rarely fail to reveal evidence which may lead to the correct diagnosis. At first the insertion of a suitably sized speculum may result in such pain that the observer must await the resolution of marked edema, but patience and gentle instrumentation frequently obviate this delay. When visualization is permitted, a circumscribed area of inflammation more brilliant and elevated than the surrounding surfaces may be recognized in the external third of the canal in-

volving one or more hair follicles. The deeper portions of the canal and the tympanic membranes are seldom affected. This type is usually unilateral in contrast to the diffuse types which are more likely to exist bilaterally. Circumscribed external otitis is due to the staphylococci which may be introduced or transplanted from other parts of the body from contaminated objects or infected persons with whom there has been recent contact. The course of furunculosis is relatively short, but autoinoculation prolongs the disease until success is achieved in breaking the chain of circumstances leading to reinfection.

It is assumed on the basis of certain bacteriologic and pathologic evidence that the objective variations encountered in diffuse infections of the external ear are but graded phases of the

membrane is inflamed. In the acute stage hemorrhagic blebs may appear on the osseous portion of the canal as the outstanding feature of the otoscopic picture (fig. 1). These may be so large as to obscure most of the drum. Edema is usually not marked, the infection remaining confined to the superficial layers of the epidermis. The process of sensitization produces tiny vesicles, which subsequently burst and deposit nutrient material encouraging to the growth of the microorganisms on the surrounding cutaneous surfaces. In addition, unprotected areas are exposed to further more penetrating invasion. The advance guard probably consists of the resident gram-positive organisms. These may be followed by gram-negative groups represented chiefly by the *Pseudomonas aerogenes*. In this event, the

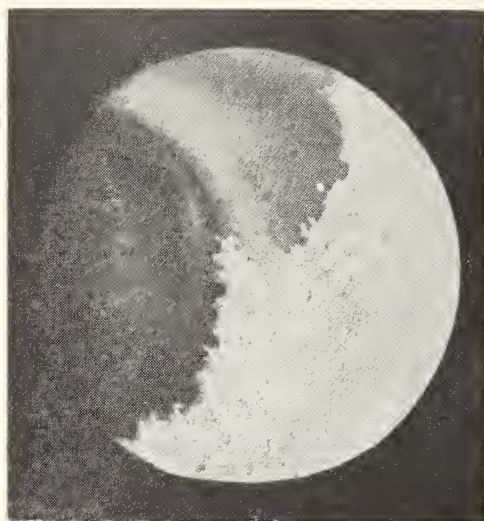


Fig. 1. Hemorrhagic bleb obscuring the drum.

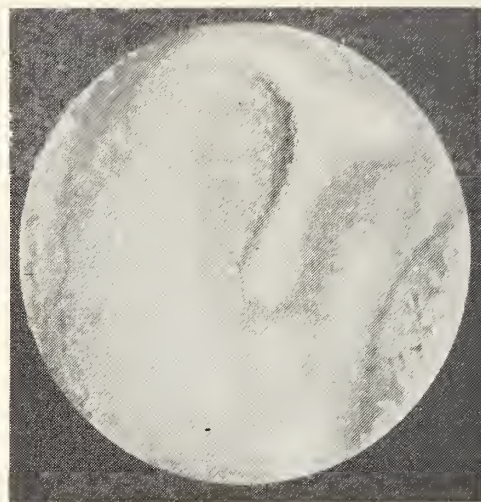


Fig. 2. Vesicular eruption covered by layers of desquamated epithelium. The inserted speculum pushes before it the characteristic detritus.

same disease, infectious eczematoid external otitis. There seem to be but two primary inciting factors responsible for the onset: (1) bacterial or mycotic sensitization of the skin in the region of a minute wound, and (2) chemical or physical sensitization of the skin by irritating agents, such as those used in the initial treatment of local lesions. Raw and granulating areas are especially prone to develop reactionary sensitivity. In an area where adequate blood supply may be compromised and where healing time is slow because of natural restrictions to better ventilation and relative inaccessibility to the natural as well as manual processes of cleansing, there is less resistance and poorer nutrition of the cells. The development of sensitization is consequently favored, especially if a particularly strong sensitizing agent comes in contact with them.²⁰

The resulting cutaneous picture is at first hyperemia (hypermic otitis externa). Usually the entire canal wall and occasionally the tympanic

stage is set for chronicity, and a therapeutically obstinate infection is established.

The chronic phase of external ear infection is preceded by conditions which permit the sustenance of those organisms which do not flourish successfully on normal tissues. Occasionally, placode-like irregularities may be observed under the magnification obtained by the otoscope or Zeiss magnifying loops. These shiny, slightly raised, grey, blue, yellow or pink elevations resemble colonies of bacteria on a blood agar culture plate, which in fact they are. Dull pain may be experienced, but burning and itching constitute the cardinal symptoms.

Exudative eczematoid otitis externa exhibits denuded patches exuding serosanguineous fluid (fig. 2). There is noted a wet blotting-paper sediment lining portions of the canal and usually covering the drum. Slight to marked edema and a kind of putty-like consistency of the outer cutaneous wall is submitted to the pressure of a probe.

The insertion of an aural speculum often gathers before it a white or yellowish-gray ring of material resembling cream cheese. This material is the result of accelerated desquamation due to inflammation. At this stage, as in the granulomatous and dry desquamative phases, the fissures that form on the inferior aspect of the meatus deliver an excretion which is remarkably alkaline. The symptoms are essentially related to the sensation of fullness, itching, burning and tenderness in the region of the fissures.

Myringitis granulosa, a condition mentioned by Politzer²¹ and Gleason,²² and since reported by Hochfilzer,²³ is characterized by tufts of granulations appearing on the canal wall as well as on the drum membrane (fig. 3). A biopsy ob-

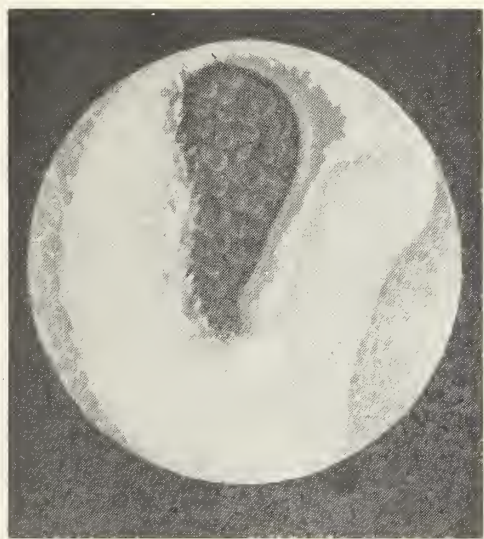


Fig. 3. Granulosomatous lesion on the drum. Irregular denuded spots may be seen on the canal wall.

tained from one such granular lesion revealed dense fibrosis with isolated areas of perivasculitis sufficiently severe to produce occlusion of the vascular channels (fig. 4). The lesions are painless until they begin to obstruct the canal and contribute to acute exacerbations. Apparently the patient may remain entirely unaware of this condition, except for slight hearing loss, despite rather extensive local pathology. Two patients observed recently adamantly denied ever having had an ear infection prior to a recent onset of aural discharge, yet half of the drum was involved in one and a large area of the posterior superior canal wall was implicated in the other. The middle ears and mastoid bones were normal and remained unaffected in both instances. The lesions do not resemble polyps but rather irregular, somewhat sessile, granulating erosions. Necrosis of large areas of the canal may ultimately develop.

The desquamative phase refers to that condition which is frequently labeled seborrheic. In-

cidentally, the diagnosis of seborrheic dermatitis as it affects the ear canal should not be made unless similar lesions of the scalp are noted.²⁴ Severe itching is the characteristic symptom of this group. It is most frequently observed among elderly patients and is usually of long duration. The skin of the canal is dry and leathery. Large

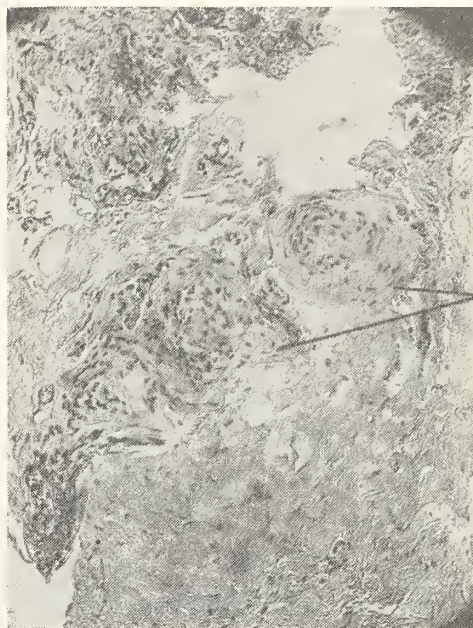


Fig. 4. Perivasculitis in dense fibrous tissue of infected cutaneous wall of external auditory canal.

scales of epidermis may be peeled from the cutaneous surface without exposing denuded areas, but tiny fissures may be revealed where natural creases or folds occur at the meatus. The drum membrane, too, may shed considerable quantities of epithelial debris. The fact that the drum usually responds to treatment quickly and prior to the tissues externally suggests the obvious direction from which contamination is introduced. To sound advice concerning prophylaxis, afflicted patients may rather cynically reply, "It is easy for you to recommend restraint in picking or scratching of the ears, but it is almost impossible to rigidly follow such advice because of the unbearable itching." As is well known, this type responds poorly even to studiously selected therapy. It is my impression that skin manifestations of this kind are easily sensitized further and that caution should be exercised in prescribing local therapy.

While a number of other organisms have been recovered from the infected surfaces of the canal, the *Bacillus pyocyaneus* has appeared in cultures with such consistency that its pathogenicity cannot be ignored. In a study recently concluded this gram-negative *Bacillus* was found almost without exception in ears previously labeled otomycotic,

seborrheic, allergic or eczematoid. During investigations conducted concurrently on the bacterial flora of ears following fenestration surgery, the *Bacillus pyocyaneus* was found to be the ever-present organism in every case of persistent and intractable aural discharge. Such infections developed after the patient left the hospital and returned to a residential and occupational environment. The lesions never resolved as long as this organism appeared in the cultures.

The cutaneous lesions with which the *Bacillus pyocyaneus*, *Staphylococci*, *Streptococci*, diphtheroids and fungi may be associated develop as a direct complication in a cut, scratch, abrasion, friction burn or other superficial irritation or injury to the skin. Even though a patient has developed an irresistible "ear consciousness," it is frequently difficult to obtain an admission of injurious instrumentation such as may be inflicted with the finger nail, a toothpick, straw or hair pin. This reluctance of the patient to admit to such habits often indicates the measure of success the physician can expect from his therapy. It explains many failures to achieve permanent cures and accounts for the list of doctors whom the patient has previously visited in the search for relief. Many of these patients refuse to assume the measure of responsibility which should be theirs.

Treatment

Acute infections and exacerbations of chronic infections of the external ear may be excruciatingly painful. Occasionally the pain is so severe that large doses of analgesics or hypnotics are necessary to completely depress it. The patient should be forewarned of the period of discomfort which is likely to be experienced. Otherwise he may lose confidence and seek advice elsewhere before the acute phase of the infection begins to resolve. No doubt there have been many instances in which the second, third or fourth consultant actually owed the success of his treatment to the therapeutic preparation established by the first, whose efforts were not fully appreciated by the patient.

The treatment of circumscribed otitis externa presents few disappointments as compared to the management of diffuse infections of the external auditory canal, the reason being that the bacteriologic problem differs considerably in each instance. In furunculosis the offending organisms are the *Staphylococci*, which are comparatively easy to control with chemotherapy. By contrast, the organism responsible for diffuse external otitis is susceptible to only a few drugs and to these it readily becomes resistant. Some strains

of *Bacillus pyocyaneus* have been noted to be resistant to all the antibiotics available for treatment.

During the initial stage of circumscribed external otitis, x-ray therapy is often abortive. Failing to halt the progress of the infection at this point, reliance is placed upon palliative measures designed to localize the process and alleviate pain. For this purpose the application of dry heat is frequently effective. Salicylates or opiates, depending upon the severity of the pain, should be prescribed in adequate therapeutic proportions during the course of discomfort. Ear-wicks saturated with bacitracin²⁵ or tyrothricin²⁶ seem to protect the surrounding areas in case of spontaneous eruption of the furuncle. When localization is complete, evacuation by aspiration following careful incision is condoned in accordance with sound surgical principles. Multiple furuncles may respond most satisfactorily to chemotherapy introduced systemically.

The principles of treatment regarding diffuse external otitis are based in part on dermatologic experience and tradition: (1) palliation, (2) reduction of edema, (3) removal of debris, (4) selection of appropriate drug, (5) correction of underlying pathology or contributing conditions, (6) prevention of recurrences.

Palliation is mentioned first because the desire to be relieved of pain, burning or itching is the motivation which compels the patient to seek medical advice. The presence of aural discharge is of secondary importance during the period of such symptoms, but it may advance to a position of primary concern following the abatement of acute symptoms. Accessibility to the inflamed parts is possible only after the edema subsides and the detritus is removed thoroughly but gently. Drugs which are effective and otherwise suitable for reducing edema are those which contain the acetate element and are mildly acid. Aluminum acetate (Burrows solution) and metacresylacetate (cresatin) are excellent solutions for this purpose. Boric acid, 2 to 4 per cent, and glacial acetic acid, 1 per cent, may be used rationally to preserve or perhaps restore the protective acid mantle of the external auditory canal.

Exudates must be thoroughly removed from the canal and particularly from the anteroinferior tympanomeatal recess. Here, accumulations escape detection and customary efforts to dislodge them. They are most efficiently and effectively withdrawn, however, by 17 gauge tympanomeatal aspirators bent to the proper angle at the extreme tip for reaching this elusive crevice. Aspiratory cleansing reduces trauma to a minimum and assures the removal of devitalized epithelium and

cutaneous excreta which may remain adherent to the canal walls even after attempts to dislodge them with cotton-tipped probes or irrigations. Clearing the ear canal of irritating substances may be all that is needed to break the chain of inflammatory events. It may be necessary to subject impacted cerumen to a softening and disintegrating process prior to its evacuation. Water and hydrogen peroxide are best for this purpose. If hydrogen peroxide is used, it should be followed by a slightly acid solution to neutralize a possible detrimental effect on the skin and to discourage cultural conditions favorable to bacterial growth. Only rarely is it necessary to resort to instrumental technics requiring anesthesia. They are justifiable only when obstructions to adequate drainage, ventilation and application of drugs cannot otherwise be dislodged. Having secured reduction of edema and complete elimination of debris, the selection of an appropriate drug for topical application may be considered.

There is now available from reliable sources impressive evidence to the effect that the offending pathogen, no longer considered a harmless soil and water inhabitant, is the *Bacillus pyocyaneus*. Experience in therapeutic management of external otitis suggests that this organism establishes a foothold in the tracks of preceding proteolytic invaders such as *Streptococci*. Consequently, drugs which attack gram-positive organisms should be used along with those which have inhibitory or lethal effects against the gram-negative ones. However, most bacteristatic and bactericidal agents are ineffective against the *Bacillus pyocyaneus*. The few that are effective are restricted in their scope of activity by familiar biologic limitations. The growth characteristics of this organism are such that it must be supplied by assimilable products of proteolysis; hence the best defense against it is accomplished by maintaining a clean field. It does not flourish with the resident flora on normal tissues. While most strains are susceptible to streptomycin²⁷ and dalyde²⁸ (dibromosalicylaldehyde), they are prone to develop resistance to these drugs. This unfortunate circumstance coupled with the frequent occurrence of skin reactions which liberate cultural media favorable to the growth of the gram-negative bacilli mitigates the therapeutic effect. Some fungistatic and bacteriostatic drugs frequently fail because the real pathogen remains unaffected. If they appear to be effective, the result is probably due to maintaining a clean wound. The gram-negative bactericides bring about successful therapeutic results because they attack the responsible pathogen. If they are ineffective because of bacterial resistance or the development of

dermatitis medicamentosa, therapeutic success may still be achieved, but this should be attributed accordingly to the removal of stagnant secretions and the prevention of accumulated debris.

Owing to the possible occurrence of drug sensitivity, the first few topical applications should be appreciably more concentrated than succeeding ones. However, high concentrates on the one hand are apt to produce unfavorable skin reactions, while impotent concentrates on the other may fail to control the pathogens which ultimately become drug-fast. Penicillin and streptomycin are recommended in strengths of 5,000 cc. for five to seven treatments, after which 500 cc. may be used as long as beneficial effects continue to be observed. If therapeutic progress ceases or if signs and symptoms become worse, it is prudent to resort to a mild astringent or detergent for the essential purpose of maintaining a clean canal.

The sensitizing drugs should probably not be used on raw granulating surfaces inasmuch as the probability of tissue rejection is markedly increased under such conditions. In acute diffuse external otitis it is better to confine topical remedies to those which are soothing or at least relatively innocuous, such as boric acid, 2 to 4 per cent, acetic acid, 1 to 3 per cent, magnesium sulfate (saturated) or equal parts of olive oil and lime water. Glycerine may be used as a substitute. The usual course of chronic diffuse external otitis is that of remissions and exacerbations. Prophylactic measures should be instituted which at least tend to interrupt the chain of circumstances responsible for reinfection. The first of these concerns "ear consciousness," which of course is accentuated by itching, burning and pain and invites digital or instrumental exploration by the sufferer. Useful drugs to be considered for suppressing this state of aural distress, according to the respective symptoms, are (1) boric acid ointment 3 per cent, with menthol 1 per cent or thymol 1 per cent; glacial acetic acid 1 to 3 per cent; 70 per cent alcohol, with menthol 1 per cent or thymol 1 per cent; (2) boric acid ointment 3 per cent; glycerine or olive oil with lime water equal parts; (3) tyrothricin or bacitracin for gram-positive bacteriostatic and bacteriocidal effects and streptomycin or dalyde for gram-negative bacteriostatic and bacteriocidal effects. Also zephiran, 1 per cent, and phemerol, 1 per cent, are acceptable detergents with desirable bacteriocidal qualities. Of the prescriptions which are especially soothing and otherwise beneficial are the following: Rx: streptomycin 0.3, salicylic acid 1.8, thymol 1.8, carbowax 60.0.

For exfoliative lesions undecylenic acid pre-

scribed for oral administration may prove valuable after further investigation.²⁹ The drugs listed above may be prescribed or applied alternately or in succession, depending upon the progress or state of pathology. All drugs except the mildest and most soothing should be withheld from aural inflammations which flare following repeated application. Invariably this tissue protest is the result of drug irritation and constitutes a warning to cease topical medication. Some of the most violent and therapeutically obstinate cases of diffuse external otitis develop because of neglect and oversight on this issue. Many other drugs have been used with satisfactory results, among them many familiar dermatologic agents. Their omission here is not to imply that they should be excluded from the therapeutic armamentarium. It should be mentioned, however, that some drugs lose their therapeutic potency when combined or mixed with nonaqueous or water insoluble vehicles. A few of these have been investigated by Senturia and Doubly.³⁰

Conclusion

Some general aspects of external otitis have been explored. In view of certain ambiguous and incongruous concepts concerning the etiology of these clinical entities and the uncertainties emerging from a variety of clinical experiences, it is obvious that experimental inquiries should be pushed beyond the present position in which we find our knowledge. According to definitely related bacteriologic and dermatologic considerations, it is suggested that diffuse external otitis is recognizable in various stages of inflammation as graded forms of the same infection, the chronicity of which is fostered by the genus *Pseudomonas*. Lesions remain therapeutically intractable so long as this organism continues to inhabit the tissues of the canal. A fundamental tenet of therapeutic management requires the maintenance of cutaneous surfaces thoroughly relieved of all detritus. This feature of therapy alone constitutes a formidable weapon against the offending pathogen. There still remain those obstinate inflammatory processes of the external ear which resist determined efforts to control or eliminate them. A better understanding of the cytochemical activities involved will surely reduce the enigmatic nature of dermatologic disorders of this kind to a soluble level.

Discussion

Oral L. Thorburn, M.D., Ames: Dr. Kos has covered the subject of external otitis in a thorough and logical way. He has given a practical classification based largely on clinical findings which points the way for management of the individual case. He has described in detail the factors contributing to this

condition — anatomy, climate, bacteriology, self trauma, sensitization, etc.—and has emphasized the importance of a changed reaction from acidity to alkalinity by the accumulation of the products of inflammation and how that influences the introduction of the *Bacillus pyocyaneus* into our consideration of treatment. Above all he has shown that thorough removal of these accumulations is the most important therapeutic measure, and that various medications are often given credit for improvement when in reality they are impotent. His aspiration method of cleaning the canals is highly commendable for thoroughness and elimination of trauma; in fact, our usual method of irrigation and swabbing out the canals often, I am sure, injures still further the already irritated epithelium. I am in agreement with Dr. Kos' entire paper and want to express my appreciation.

The only contribution I can make to this subject is to offer a perplexing question based on an observation: What causes the total suspension of wax secretion? You never see normal soft cerumen in itchy or inflamed ear canals. Did the lack of wax start the itching and self trauma, which I believe always precedes canal inflammation, or is it only a result of the infection? Is the origin of external otitis a neurodermatitis? Certainly it is much aggravated and its course prolonged in a patient who refuses or is unable to avoid scratching his ears. Could the pruritis and following course of events originate from a temporary suspension of wax secretion in a neurotic patient?

BIBLIOGRAPHY

1. Morton, H. E.; North, L. L., Jr.; and Engley, F. B., Jr.: Bacteriostatic and bactericidal actions of some mercurial compounds on hemolytic streptococci; in vivo and in vitro studies; Council on Pharmacy and Chemistry. *J.A.M.A.*, cxxxvi:37-41 (Jan. 3) 1948.
2. McBurney, R.; and Searcy, H. B.: Otomycosis: investigation of effective fungicidal agents in treatment. *Ann.Otol.Rhin.&Laryng.*, xlv:998-1008 (December) 1936.
3. Chisolm, J. J.; and Sutton, A. C.: Otomycosis; report of 9 cases treated with potassium iodide. *Arch. Otolaryngol.*, ii: 543-556 (December) 1925.
4. Dart, M. O.: Otomycosis; treatment with silver picrate. *Arch. Otolaryng.*, xxxi:885-910 (June) 1940.
5. Greaves, F. O.: Phenyl mercuric nitrate in treatment of otitis externa and of dermatophytoses. *U.S.Nav.M.Bull.*, xxxiv: 527-532 (October) 1936.
6. Senturia, B. H.: Treatment of external otitis; local sulfonamide therapy. *Laryngoscope*, liv:277-286 (June) 1944.
7. Senturia, B. H.: Etiology of external otitis. *Laryngoscope*, lv:277-293 (June) 1945.
8. Quayle, A. F.: Otitis externa in New Guinea. *M.J.Australia*, ii:228-231 (Sept. 2) 1944.
9. Davis, E. L.: Mycotic ear infections at advanced Allied base. *M.J.Australia*, ii:437-438 (Nov. 27) 1943.
10. Daggett, W. I.: Desquamative otitis externa in Malta. *J.Laryng.&Otol.*, lvii:427-446 (October) 1942.
11. Nelson, R. F.: External otitis in South Pacific. *Ann.Otol., Rhin.&Laryng.*, liv:367-372 (June) 1945.
12. Salvin, S. B.; and Lewis, M. L.: External otitis, with additional studies on genus *Pseudomonas*. *J.Bact.*, li:495-506 (April) 1946.
13. Syverton, J. T.; Hess, W. R.; and Krafchuk, J.: Otitis externa; clinical observations and microbiologic flora. *Arch. Otolaryng.*, xliii:213-225 (March) 1946.
14. Sharp, W. B.; and John, M. B.: Pathogenicity of *Aspergilli* of otomycosis. *Texas Rep.Biol.&Med.*, iv:353-363, 1946.
15. Gill, K.: Otitis externa mycetica; comment concerning prevalence, diagnosis and treatment of otomycosis. *Arch.Otolaryng.*, xvi:76-82 (July) 1932.
16. Gill, W. D.: Mycotic infections in otolaryngology. *South M.J.*, xxxi:678-685 (June) 1938.
17. Lederer, F. L.: Diseases of the Ear, Nose and Throat. Philadelphia, F. A. Davis Co., 1938.
18. Fabricant, N. D.; and Perlstein, M. A.: pH of the cutaneous surface of external auditory canal; a study of 27 infants, 44 children and 60 adults. *Arch.Otolaryng.*, xlix:201-209 (February) 1949.
19. Marchionini, A.; and Hausknecht, W.: Säuremantel der Haut und Bakterienabwehr; I. die regionale Verschiedenheit der

Wasserstoffionenkonzentration der Hautoberfläche. Klin. Wehnschr., xvii:663-666 (May 7) 1938. II. über die regionäre Verschiedenheit der Bakterienabwehr und Desinfektionskraft der Hautoberfläche, *ibid.*, xvii:736-739 (May 21) 1938.

20. Sneddon, I. B.: Some dermatological complications of open wounds. *Proc. Roy. Soc. Med.*, xl:883-884 (December) 1947.

21. Politzer, A.: A Textbook of the Diseases of the Ear and Adjacent Organs. Translated and Edited by J. P. Cassells. Philadelphia, Henry C. Lea's Son, 1883. p. 225.

22. Gleason, E. B.: Manual of Diseases of Nose, Throat and Ear, ed. 7. Philadelphia and London, W. B. Saunders Co., 1933. p. 390, 391.

23. Hochfilzer, J. J.: Myringitis granulosa. *Laryngoscope*, lv: 509-518 (September) 1945.

24. Nomland, R., professor of dermatology, University Hospitals, State University of Iowa: Personal Communication.

25. Meleney, F. L.; and Johnson, B.: Bacitracin therapy: first 100 cases of surgical infections treated locally with antibiotic. *J.A.M.A.*, cxxxiii:675-680 (March 8) 1947.

26. MacKee, G. M.; Sulzberger, M. B.; Herrmann, F.; and Karp, F. L.: Treatment of pyodermas with interface active solution of tyrothricin. *J. Invest. Dermat.*, vii:175-183 (August) 1946.

27. Senturia, B. H.; and Broh-Kahn, R.H.: Use of streptomycin in treatment of diffuse external otitis. *Ann. Otol. Rhin. & Laryng.*, lvi:81-89 (March) 1947.

28. Hayes, M. B.; and Hall, C. F.: Management of otogenic infection. *Tr. Am. Acad. Ophth.*, li:149-163 (Jan.-Feb.) 1947.

29. Perlman, H. H.: Undecylenic acid given orally in psoriasis and neurodermatitis: a preliminary report. *J.A.M.A.*, cxxxix:444-447 (Feb. 12) 1949.

30. Senturia, B. H.; and Doubly, J. A.: Treatment of external otitis: use of vehicles and antibiotics in external auditory canal; in vitro studies. *Laryngoscope*, lvii:633-656 (October) 1947.

**College of Medicine
State University of Iowa
CLINICOPATHOLOGIC
CONFERENCE
October 26, 1949**

Summary of Clinical Record

A 47 year old man reported to the University Hospital on May 7, 1940, complaining of difficulty in walking, a condition which had gradually made its appearance 15 months previously. He was employed in a meat market, smoked one package of cigarettes daily, consumed a moderate amount of alcohol and denied venereal infection. His past medical history included a fracture of the left arm in childhood and seasonal hay fever. The family history was noncontributory. His symptoms began insidiously about January 1939, at which time he became aware of stiffness of the right lower extremity. This condition was painless. In November 1939 he began to experience numbness of the distal portion of the right lower extremity. Other complaints included fatigue and general indisposition.

At the time of his first examination his speech was slightly slurred. His pupils reacted sluggishly to light but contracted promptly in accommodation. There were nystagmoid movements on extreme lateral gaze but no true nystagmus. He complained of no diplopia, and no squint was observed. His optic disks were normal. The other cranial nerves were intact. Examination of the chest was not remarkable. The strength of the upper extremities was good; coordination was unaffected; and rapid alternate motions were performed normally. There was increased tonus

of both lower extremities, more so on the right. The alternate motion rates were performed in the lower extremities at a rate which was estimated to be 50 per cent of normal. There was inaccuracy in placing the right heel on the left knee. The deep reflexes were normal in the upper extremities but hyperactive in the lowers. Plantar stimulation produced extension in both lowers. The sensory examination was normal. He walked in slightly ataxic fashion on a broad base. The Romberg sign was positive. His blood pressure was 140/100.

The urine was negative for albumin and sugar. Serologic blood tests were negative for syphilis. The hemoglobin value was 13 gm. per 100 ml., erythrocytes 4.8 million per cu. mm., and leukocytes 9,300 per cu. mm. He was advised to enter the hospital for an examination of the spinal fluid, but he did not wish to submit to this procedure.

On Dec. 6, 1943, he developed pain and swelling in the right lower extremity, accompanied by a chill and probable fever. The interval history revealed that his difficulty in walking had become much worse, and that he had developed clumsiness of his hands as well. Additional neurologic findings now included ataxia of the upper extremities and impairment of vibratory sense, position sense and two point discrimination in his lower extremities. His blood pressure was 150/95. The right thigh and leg were swollen and edematous. A tender, enlarged vessel was palpable at the inner and anterior aspect of the right thigh. There was coldness and mottling of the right foot. He was admitted to the Medical Service for a period of eight days, during which time he was afebrile. There was no leukocytosis. Urinalysis showed no albumin nor sugar. The pain in the right lower extremity gradually subsided, but the neurologic manifestations remained the same.

His last hospital admission was on Dec. 23, 1948. Three days previously he had developed a dull aching pain in the epigastrium, intermittent in character. On the evening before admission he had tried to go to the bathroom with the aid of crutches, but after taking several steps he suddenly felt dizzy and fell to the floor but did not lose consciousness. Shortly thereafter he developed severe substernal pain in addition to the epigastric distress.

At the time of his second admission he did not appear to be acutely ill. His temperature was 100.6 F. rectally. He was not cyanotic nor dyspneal. Examination of the head and neck were essentially negative. The anteroposterior diameter of the chest was somewhat increased.

The lungs were clear to percussion and auscultation. The heart borders were indeterminate, but the heart did not seem to be enlarged. There was no overactivity. No murmurs nor arrhythmias were elicited. The blood pressure in the right arm was 110/90 and in the left arm 104/80. The pulse rate was 128 per minute. There was some distension of the urinary bladder. The neurologic signs were approximately the same as previously recorded. The urinalysis was negative for albumin and sugar. A blood count showed 15 gm. of hemoglobin and 8,700 leukocytes per cu. mm. Numerous electrocardiographic tracings were made. X-Ray examination of the chest was normal.

On Dec. 30, 1948, he complained of severe epigastric pain, with substernal radiation. He became cyanotic, and his respiratory rate rose to 55 per minute. He became apprehensive. Following symptomatic therapy his distress was rapidly alleviated, and the following day he felt relatively well until 2230 hours, when he again became dyspneal and cyanotic. He expired 30 minutes later.

Dr. A. L. Sahs (Neurology): This man was 47 years of age when he first reported to the Neurology Outclinic Service. The neurologic disease of which he complained made its onset in rather an insidious fashion when the patient was 45 years old. This disorder was painless and was characterized by numbness and poor use of his lower extremities, particularly the right. His pupils did not react well to light but did come down promptly in accommodation. There were a few flickering movements of the eyeballs on lateral gaze but no true nystagmus. Examination of the optic disks was normal. It was noted at that time that there was slurring of his speech. The upper extremities appeared to be normal at that time. The lower extremities were hypertonic and ataxic. He performed the alternate motion rates of the lowers improperly. Along with these findings there were hyperactive deep reflexes and the Babinski phenomena. The sensory examination was normal. The blood pressure was slightly elevated. Serologic tests on the blood were negative for syphilis. The blood count was normal, but there is no indication in the record that a differential smear of the peripheral blood was performed. A spinal fluid examination was suggested, but he did not wish to enter the hospital for this test.

Syphilis should be considered as a possible diagnosis, even though the blood Wassermann was negative. It is not uncommon to encounter individuals with syphilitic disease of the spinal cord who, as a result of treatment, and sometimes as

a result of the natural processes of healing, have negative serologic reactions. Another condition to be kept in mind is pernicious anemia with spinal cord complications. It would have been possible for him to have had cord changes without the other manifestations of pernicious anemia. A spinal cord tumor should also be considered. It seems rather unlikely that he would have had a spinal cord tumor for this length of time without experiencing more pain and without exhibiting sensory changes at the end of 18 months. The fourth diagnostic possibility is multiple sclerosis.

Student: In the discussion of the problem presented today we considered four possibilities, all of which were put forth by Dr. Sahs. The majority of the class was in favor of multiple sclerosis. Eighteen of the members of the class were of the opinion that this was a manifestation of syphilis. Thirteen were in favor of subacute combined sclerosis. One member of the class suggested the diagnosis of spinal cord tumor, but he did not specify the region. With respect to the terminal event, the majority believed a myocardial infarction brought about the demise. Eight were of the opinion that he had a dissecting aneurysm of the aorta, and eleven suggested a combination of myocardial infarction with superimposed pulmonary embolism. Three members of the class diagnosed the condition as pulmonary embolism.

Dr. Sahs: Will you discuss the reasons for arriving at these conclusions?

Student: I believe that the majority of the class considered multiple sclerosis the most likely condition because of the dissemination of the lesions. The patient had slurring of speech, for example. One sometimes finds the Argyll Robertson pupil in multiple sclerosis. There is slight indication that there may have been some vestibular involvement. There was involvement of the corticospinal tracts, manifested by hyperactivity of the deep reflexes in the lower extremities and by positive Babinski signs. When all of these factors are taken into consideration, there was more dissemination than one finds in subacute combined sclerosis or in syphilis.

I think that the reasons for seriously considering myocardial infarction were that the patient was in the particular age group which is subject to this disorder, his pain was epigastric in location, and his blood pressure fell from the previous reading of 150/95 to 110/90. In instances of myocardial infarction the systolic blood pressure will fall more than the diastolic pressure.

*Dr. Wm. B. Bean (Internal Medicine):** There are three major problems: a progressive neurologic disease which was disabling and crippling, a vascular disturbance in the lower extremity in his second admission in 1943, and the final event which led to his death within a week after his entry to the hospital. The one disease that might have caused the whole group of troubles is syphilis. We have many reasons against one disease entity. Although he does not have Charcot's triad, intention tremor, scanning speech and nystagmus, at least he had part of the picture, and, with no positive historic or serologic evidence of syphilis, I conclude that his neurologic disease was disseminated sclerosis.

What happened in December 1943? The neurologic disorder had not progressed abruptly, and I look upon it as thrombophlebitis, from which he recovered on conservative treatment. Regarding the final 10 days three possibilities can be discussed; namely, (1) acute infarction of the heart, (2) pulmonary embolus, particularly with the history of phlebitis, and finally (3) dissection of the coats of aorta. I believe that this man had multiple sclerosis, had had phlebitis in the past, and that he died following an acute myocardial infarct. He was 55 and the age of highest incidence of acute infarction of the heart is in the fifties and sixties.

Now what happened to him just prior to his admission? Three days before he came in, he developed a dull, intermittent aching pain in the epigastrium. Harold Feil, of Cleveland, pointed out that before an episode of acute myocardial infarction there may be a premonitory warning which tends to differ from angina.¹ Subsequent studies have shown that approximately 20 per cent of persons who develop acute myocardial infarcts do so on the basis not of thrombosis but of severe sclerotic disease of the coronary artery.² Some of those may experience the same premonitory symptoms, so we can suppose that it is the developing of the infarct rather than thrombus formation which causes this premonitory disturbance. Recently at the Veterans Hospital in Des Moines this problem has been studied, and it was found that more than 50 per cent of all patients with acute infarction of the heart have premonitory warning. This suggests infarction of the heart in contradistinction to pulmonary embolism or aortic dissection.

When this man got up, attempting to go to the bathroom, he became so dizzy that with his walking disability he fell to the floor, but he did not lose consciousness. There are a great many things which will cause fainting. It is a

symptom in approximately 7 per cent of all persons who have an acute myocardial infarction. It sometimes is the initiating manifestation. The causative mechanism is not known. It may be carotid sinus sensitivity which is common in coronary artery disease. Three mechanisms may include fainting: (1) slowing of the pulse, (2) lowering of the blood pressure, and (3) a direct reflex, perhaps producing spasm of cerebral vessels. Other possibilities are arrhythmia, a transitory asystolia or a mild Stokes-Adams attack. Pain itself, by reflexes over vagus and splanchnic nerves, may induce loss of consciousness. Persons with coronary occlusion who die suddenly, the so-called instant physiologic death of Soma Weiss, often have a history of fainting.

What do we learn from the examination during his terminal stay that throws light or confusion on the supposition that he died of an acute infarct? In the first place, he did not appear acutely ill. If one compares patients who have had a dissecting aneurysm of the aorta with those who have had an acute infarct of the heart, ordinarily those who have had a dissection will be critically ill. Myocardial infarcts may take place without giving any symptom of which the patient complains enough to come to a doctor. We frequently find scars in the heart indicating old infarcts where we have no history, even though the patient may have been under the care of a doctor for a long period of time. His lungs were clear; he was not cyanotic or short of breath. That is against, but by no means excludes, pulmonary infarction. His heart did not seem to be enlarged. In most patients who die with acute infarction of the heart, the heart is enlarged. His blood pressure was lower than it had been previously. In a large series of patients with acute infarcts of the heart the blood pressure will be found in a few to go up during the acute attack, and in some it will stay the same, having been normal or hypertensive before, but in the majority it will come down to normal or perhaps even to shock levels. So we have an additional clue which falls in line with the hypothesis that this man had an acute infarct. His bladder was distended which, I think, is related to the neurologic disease. Ordinarily, if one finds anuria after an acute infarct, it is the resultant reduction in the formation of urine rather than a cord bladder. He had numerous electrocardiographic tracings, another hint that one can legitimately use in the detective-story approach to the problem. I haven't seen them; Dr. January will discuss them, and after he does I may want to change my comments.

Finally, the day before he died he complained

*Discussed without knowledge of pathologic findings.

of severe epigastric pain with substernal radiation quite similar to what he experienced before he became cyanotic, and he was in violent respiratory distress and apprehensive. When patients have pain in their chest, almost always they are apprehensive, because, traditionally, if something is wrong with the heart the patient is in serious difficulty. Apprehension may give rise to rapid, shallow respiration and may even lead to tetany. I think that he had either an extension of his infarct or simply more pain because of acute anoxia. It also would be in keeping with pulmonary embolism. We don't have any further discussion of other signs in his chest, and it is conceivable at that time that he had a pulmonary embolism, which is common enough in those whose limbs lie inert when disabled by neurologic disease. We don't have any reference to increased venous pressure.

The most common cause of death after infarct of the heart is congestive failure. Another large group dies in shock. He could have had a pulmonary infarct after dislodging a thrombus in the right ventricle. The usual things which we expected to find were not described.

In conclusion, I believe that this man had three diseases: a chronic degenerative neurologic disease, protean in manifestations, which fits most nearly into the diagnosis of disseminated sclerosis, (2) perhaps as a sequel to this, thrombosis and phlebitis of his leg veins, and finally (3) an acute myocardial infarct which killed him in all probability because of ventricular standstill. There is a possibility that he had cardiac rupture, which I would put ahead of pulmonary embolism. That pulmonary emboli explain the entire terminal picture is possible though a second choice.

Dr. L. E. January (Internal Medicine): Five electrocardiograms were recorded on this patient. The tracing on the day of admission revealed an incomplete right bundle branch block. This persisted for only a short time, and tracings recorded during the latter days of the patient's life were entirely normal. Transient right bundle branch block, although not diagnostic, strongly suggests pulmonary embolism. Anteroseptal myocardial infarction often causes right bundle branch block, but it is rarely transient in nature. Furthermore, it does not interfere with the appearance of characteristic abnormalities of the QRS complex, which are diagnostic of myocardial infarction. Such was not the case in the serial tracings on this patient. The textbooks of electrocardiography do not stress the right bundle branch block aspect of pulmonary embolism. Instead the emphasis is upon the deep S wave in lead I and the Q₃ T₃ pattern in lead III, with the resulting

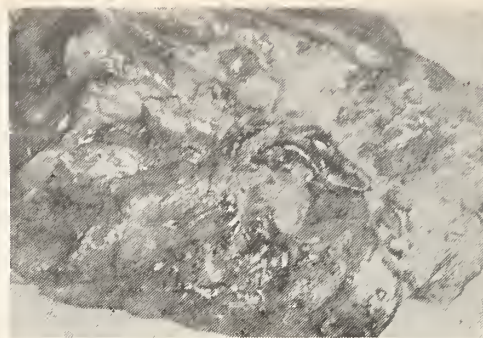


Fig. 1. Pulmonary artery containing embolus.

uncertainty regarding posterior myocardial infarction. When this standard lead pattern exists, the deep S wave in lead I is almost certainly due to right bundle branch block, and the deep Q wave in lead III may also be so related or due to a positional effect. The fallacy of taking only standard leads is no better illustrated than in pulmonary embolism. Serial tracings which include in addition an adequate number of anterior chest leads and unipolar limb leads will almost always aid in differentiating pulmonary embolism and myocardial infarction when doubt exists on clinical grounds alone.

Clinical Diagnosis

Multiple sclerosis.

Necropsy Findings

There were two significant lesions. The pulmonary arteries contained numerous fragmented blood clots which had the characteristics of thrombi formed at a distant site. Numerous cone-shaped infarcts of lung tissue had resulted from occlusion of branches of the pulmonary arteries by these emboli. These infarcts were zones of lung tissue in which the alveolar spaces were filled with extravasated erythrocytes. The alveolar walls were necrotic within the infarcts. These lesions appeared to have been developed fairly recently, probably within the 48 hours preceding death. The site of origin of the emboli was not discovered.

The brain and spinal cord were the sites of the second significant lesion. Distributed throughout the white matter of both structures were numerous small foci of gliosis. In these areas the fiber tracts were replaced by dense glial tissue which was relatively poor in cells and contained a few small vessels. About them were small collections of lymphocytes and phagocytes filled with old blood pigment. The margins of these foci were fairly sharp, although the glial fibers blended imperceptibly with those of the uninvolved white matter adjacent to them. The distribution of these lesions was not uniform. Some appeared immediately beneath the ependyma lining the ventricles.

None involved gray matter. The olivary nuclei of the medulla contained some.

Incidental findings included a generalized arteriosclerosis, pleural adhesions and chronic passive congestion of the liver and spleen.

Necropsy Diagnosis

Multiple sclerosis.

Massive pulmonary embolism.

Pulmonary infarcts, bilateral.

Arteriosclerosis, generalized.

Visceral congestion.

Pulmonary emphysema, mild.

Simple cysts, right kidney.

Dr. Bean: It is discouraging to find some apparatus or scientific instrument gradually taking the place of the clinician at the bedside. I don't

"red herrings" in case history protocols, so that they may not be easily led into erroneous diagnoses. There are at least three such "red herrings" in the present protocol, and I would like to call attention to two of them. The present protocol indicates that nystagmoid movements were evoked upon extreme lateral gaze. Virtually everyone, whether sick or well, will exhibit such nystagmoid movements when required to sustain gaze upon an object in the extreme lateral part of either visual field. Nystagmoid movements are clinically significant only when they can be demonstrated some 40 to 60 degrees off the optic axis in the position of physiologic rest. Therefore, in carrying out the tests for nystagmus, the examiner should avoid holding his finger or other target in a position much beyond 60 degrees.

The second "red herring" bears reference to the early neurologic signs which developed in this patient. We note that the individual is stated to have developed paresis, spasticity, sensory changes, hyperreflexia and other upper motor neuron signs in the lower extremities. The tendency is to regard such changes as almost invariably due to disease of the spinal cord. It is well for us to realize, however, that a highly focal lesion in the cerebral hemispheres can produce just such a picture. One should not allow himself to be too easily misled, even when there is neurologic evidence that the upper extremities participate in the patient's disability. A tumor located in the paracentral lobule of the mesial faces of the cerebral hemispheres can quite closely simulate a spinal cord tumor or other lesion



Fig. 2. Cerebrium, showing area of demyelination and gliosis in subcortical white matter (Weil stain).

know that we will ever come to the point where the diagnosis can be made on the conveyor belt. This is a lesson to us all. Clinically, one may have no means of discriminating between a pulmonary infarct and an acute myocardial infarct. My diagnostic error has not been stressed enough, and the junior class made the same error. However, the students had best make the diagnosis of an acute myocardial infarction when this story is given. They will not do a proper job, however, unless they get electrocardiographic help.

Do you believe that the final embolus was one of moments or had it been there for some time?

Dr. E. Boyd (Pathology): It was a matter of moments.

Dr. Bean: It's of some interest that in a study of infarction of the heart I did some years ago² all who died of pulmonary embolism died of an embolus that came from the great veins rather than from a right ventricular mural thrombus. That is of no help if you do not think of it to begin with. Everyone should bear in mind that to distinguish clinically between pulmonary infarction and myocardial infarction may be difficult.

Dr. Russell Meyers (Neurosurgery): It is well for the students to get in the habit of identifying



Fig. 3. Spinal cord, area of demyelination (Weil stain).

manifested by paraplegia. The region of the paracentral lobule is not an uncommon site for the development of a meningioma which, arising from the falx, may grow slowly and steadily until it compromises the function of that portion of the motor and sensory strip of the cortex which faces the falx. Such tumors may develop completely

(Continued on page 579)

STATE DEPARTMENT OF HEALTH



ANNUAL CHRISTMAS SEAL CAMPAIGN

On November 21 the forty-third nation-wide Christmas Seal campaign was launched by the National Tuberculosis Association and its more than 3,000 affiliates throughout the United States, Alaska, Hawaii, Puerto Rico, the Canal Zone, the Philippine Islands, Canada and many countries of Europe, Asia and South America. The international crusade for the eventual eradication of tuberculosis embraces an extensive and comprehensive program.

The five services covered in the tuberculosis program include fact-finding, health education, case-finding, treatment and information service. Funds derived from the annual sale of Christmas Seals are its sole support. The first Christmas Seal sale conducted in the United States netted \$3,000. With the organized effort to eventually eradicate tuberculosis in this nation, and with the American public alert to the fact that tuberculosis is one of our most communicable diseases, the national Seal sale has now grown to a gross figure of over 20 million dollars.

The idea of the Christmas Seal was originated by Einar Holboell, a Danish postal clerk, in 1904. The first American Seal was designed and sold by Emily P. Bissell, a social worker of Wilmington, Del. In 1907 the first Christmas Seal sale was launched to raise funds for 8 TB patients in Delaware. The next year the American Red Cross sponsored the nation-wide campaign to further the work of the National Tuberculosis Association, which was then four years old. In 1919, 11 years later, the National Association became the sole sponsor of the Christmas Seal at the request of the American Red Cross, thus making possible the sale of Seals through local tuberculosis associations.

The Iowa Tuberculosis Association was organized on July 27, 1905. County associations were organized throughout the state until the last one of the 99 counties, Monona, was organized on Nov. 13, 1947. Just as the over-all program of the National Association has progressed, the same is true in Iowa. Proceeds from the Christmas

Seal sale in Iowa have increased from \$14,000 in the first one to \$469,000 in 1948. The announced goal for the 1949-1950 program is a half-million dollars.

The educational activities of the tuberculosis movement have been far-reaching and comprehensive. They have included the cooperative case-finding program, the contact program, the high school miniature program, the surveying of state institutions, county homes, industries and numerous other projects.

In November 1948, after long range planning, the state community-wide x-ray program was made a reality. This project will offer to every citizen in Iowa a chest x-ray free of charge. Ten pilot counties were selected for survey, and the last one is being prepared for survey at this time. Much preliminary planning is necessary to effect substantial participation by the county residents, and, while the over-all percentage has been more than 70 per cent, every person who does not have an x-ray has lost an opportunity to find out whether or not he has healthy lungs.

Iowa has the enviable position of having the lowest mortality rate from tuberculosis in this nation or anywhere in the world. But this record can only be held by the continuous and concentrated effort of the entire program. The mortality rate from tuberculosis in 1915 in Iowa was 51.4 per 100,000, but it has now been reduced to 9.8.

Because tuberculosis is now at an all-time low in this state, and since the Tuberculosis Association is now able to include another phase of health in the program, a motion was made on Aug. 17, 1949, at the joint meeting of the Iowa Tuberculosis and Health Association and the Iowa Heart Association, "To affiliate in a program of education, organization, research and cooperative fund-raising for 1950." The program is to be subject to review and vote at each annual meeting. This year there will not be a separate campaign for heart funds, but the educational activities will be included in the combined program—TO FIGHT TUBERCULOSIS AND HEART DISEASE.

During the past, the tuberculosis program has been adequately supported by the citizens of Iowa,

and it is the sincere hope of the Iowa Tuberculosis and Health Association that the splendid support of the control program we have enjoyed in the past will be continued in the future.

CHRISTMAS SEAL FUNDS ARE THE SOLE SUPPORT OF ALL TUBERCULOSIS ACTIVITIES. DON'T FORGET TO BUY AND USE YOUR CHRISTMAS SEALS THIS YEAR.

IMMUNIZATIONS FOR OVERSEAS TRAVEL

Since the State Department of Health frequently receives requests for immunizations for travel abroad, we present the following summary from the bulletin prepared by the Office of International Health.

Information as to which immunizations are required for travel to any particular country may be obtained from the Passport Division of the Department of State, which will mail a blank international certificate of inoculation and vaccination.

The local physician can do any of the immunizations except for yellow fever immunizations, which are given only at the port of embarkation or at a U. S. Marine Hospital because of the great difficulty of maintaining a potent vaccine.

Smallpox—Recommended before travel to any foreign country. Vaccinate at least 14 days before leaving the United States. Observe and record the reaction on the third and ninth days. The certificate is valid for three years. If yellow fever inoculations are to be done, too, they should be given at least five days before the smallpox vaccination.

Yellow Fever—Give at least 10 days before leaving the country. One injection is required. Certificate becomes valid on the tenth day following vaccination and remains so for four years. Rather than spending 10 days or more at the port of embarkation, many would prefer to go to their nearest U. S. Marine Hospital for the inoculation. (See the accompanying list of these hospitals.)

Cholera—Start immunizations at least two to three weeks before leaving the United States. The standard course is two injections at 7 to 10 day intervals. A third injection is advisable. The International Cholera Certificate is valid for six months from the date of last vaccination. It can be kept in force with booster injections.

Typhus—Begin inoculations two to three weeks before leaving the country. Standard course is two doses at a 7 to 10 day interval. While the certificate is valid for one year, a booster dose is recommended at six months if the danger of typhus is still present.

Typhoid and Paratyphoid—Should be taken by every person traveling abroad. Standard course

is three inoculations at 7 to 10 day intervals. Annual boosters should be taken.

Diphtheria—Children under 15 who go abroad should be immunized against diphtheria. For travel in some areas of high diphtheria incidence, adults up to the age of 35 should be immunized if their Shick tests are positive.

Stations of the Public Health Service Administering Yellow Fever Vaccine

New York City	U. S. Public Health Service Dispensary 67 Hudson St.	Barclay 7-6150
Baltimore, Md.	U. S. Marine Hospital Wyman Park Dr. and 31 St.	University 3930
Washington, D. C.	U. S. Public Health Service Dispensary Federal Security Bldg., So. 4 and D Sts., S.W.	Executive 6300
Miami, Fla.	(1) U. S. Quarantine Sta. Fishers Island (2) U. S. Public Health Service Relief Sta. 365 Federal Bldg.	5-1959
New Orleans, La.	U. S. Marine Hospital 210 State St.	Uptown 8700
Brownsville, Tex.	U. S. Quarantine Station U. S. Border Service Bldg. International Bridge and 14th St.	.....
Chicago, Ill.	U. S. Marine Hospital 4141 Clarendon Ave.	Lake View 6340
Los Angeles, Calif.	U. S. Public Health Service Relief Station 406 Federal Bldg.	.....
San Francisco, Calif.	U. S. Marine Hospital 14th Ave. and Park Blvd.	Bayview 0259, 0260, 0261, 0262, 0263, 0264, 0265
Hamilton, Mont.	Rocky Mountain Laboratory South 4th St.	Call Hamilton and ask for Laboratory Garfield 2260
Cleveland, Ohio	U. S. Marine Hospital Fairhill Rd. and E. 124th	7714, 2-0161, 2-0162
Savannah, Ga.	U. S. Marine Hospital York and Abercorn Sts.	Ft. Worth 5-2104, 5-2105, 5-2106
Ft. Worth, Tex.	U. S. Public Health Service Hospital	Valley 2-9300
Detroit, Mich.	U. S. Marine Hospital Windmill Pointe	Stadium 2-3400
Boston, Mass.	U. S. Marine Hospital 77 Warren St.	

Kansas City, Mo.—Special arrangements have been made so that Dr. H. B. Dye, Medical Director, Trans-World Airlines, Room 507, New England Bldg., 9th and Wyandotte, Kansas City, Mo., can give these yellow fever immunizations.

MORBIDITY REPORT

Diseases	Oct. '49	Sept. '49	Oct. '49	Most Cases Reported From:
Diphtheria	1	1	6	Black Hawk
Scarlet Fever	40	14	56	Boone, Delaware, Polk, Story
Typhoid Fever	0	1*	3	.....
Smallpox	0	0	0	.....
Measles	46	19	17	Black Hawk, Fayette, Polk
Whooping Cough...	9	9	75	Scattered
Brucellosis	29	35	39	Scattered
Chickenpox	52	19	103	Black Hawk, Calhoun, Sioux
German Measles...	1	0	1	Boone
Influenza	0	0	0	.....
Meningitis	3	1	8	Dubuque, Linn, Polk
Mumps	51	27	104	Floyd, Lee, Worth
Pneumonia	1	4	7	Worth
Poliomyelitis	156	267	361	Black Hawk (14), Franklin (13), Dubuque (7), Clayton (5) and all other counties less than 4
Rabies in Animals..	14	19	..	Polk (1), 1 case in other counties
Tuberculosis	92	98	55	For the State
Gonorrhea	98	50	95	For the State
Syphilis	186	181	124	For the State
*Paratyphoid				

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An Invitation to the House of Delegates

Any physician who plans to attend the Interim Session of the American Medical Association, to be held in Washington, D. C., December 6-9, 1949, is tendered a personal invitation to sit in with the House of Delegates at any time during their deliberations. Many physicians have the idea that these meetings are closed sessions intended for the official delegates only.

Medicine as a whole always seems to be faced with problems requiring grave considerations. Certainly, no one can deny that the problems facing medicine at the present time are fully as serious as at any period during the past. With investigations being carried out by the Federal Bureau of Investigation at AMA headquarters and among twenty-two medical societies, it is imperative that the general public should realize the medical profession is primarily interested in the quality of medical care rather than the monetary benefits to be derived by the individual physician. These matters will be discussed before the House of Delegates, and the presence of any physician will be welcome during these deliberations.

Public Relations Value of a Grievance Committee

At the recent public relations conference held in Chicago the consensus seemed to be that the one thing which does the most to make for good public relations is the formation and functioning of a grievance committee. In the past some county medical societies have had committees to whom the question of high fees could be referred, but seldom have these committees possessed any but an advisory authority. It is true that the opin-

ion of the committee usually carries a good deal of weight with the physician in question in each case, but, if he chooses not to abide with the decision of the committee, there has been no way of compelling him to do so.

About two years ago the Colorado Medical Society undertook an extensive overhauling of its corporate body, and the one thing occurring as a result of that overhauling which has produced the best results was the formation of a grievance committee. It is called a board of supervisors and acts as a grand jury. All complaints concerning professional conduct, fees and the like are referred to it, and it is its duty to investigate each complaint thoroughly. In so doing it may call any witnesses necessary to obtain the complete story. One good feature of the committee set-up is that no supervisor may pass upon complaints against a physician in his district. He is barred from attendance while matters affecting his own locality are being considered.

The board of supervisors as such has no executive authority and refers its findings to the board of councilors, which has supreme charge of all questions of ethics and discipline of members. The board of councilors exercises original jurisdiction over, and decides finally for the society, all questions of ethics, discipline or right to membership submitted to it; it interprets the constitution and by-laws of the society; and it has power to establish and prescribe rules of procedure to govern all cases within its jurisdiction. The Principles of Medical Ethics of the American Medical Association serve as the rule of conduct and guide for the board of councilors.

Some of the larger county medical societies in Iowa are seriously discussing the formation of a grievance committee. After listening to the various speakers in Chicago, we cannot help but feel this would be a step in the right direction. The medical profession is not sacrosanct; we try to do our best, but it is inevitable that once in a while things occur that a patient does not understand. If under such conditions he feels he has no recourse, he may become embittered at the profession; but, if there is an avenue by which he may arrive at consideration and explanation of his problem, he will have a much friendlier feeling regardless of the outcome.

Whether it is best to have a county committee or one for the state is a matter for debate. Colorado feels the state committee, by barring local physicians from sitting in judgment on their associates, removes the chance for personal bias. On the other hand, local committees are familiar with local problems, and there is no valid reason why they cannot function impartially and effectively.

State to Accept European DP Doctors

The Iowa Board of Medical Examiners, according to Dr. M. A. Royal, secretary, has decided to use several doctors, now in displaced persons camps in Europe, to meet the need for psychiatrists and physicians in mental hospitals. Steps have been taken to bring two European psychiatrists to the state. They will work under the direct supervision of a doctor or the superintendent of the institution and will be expected to pass the regular Iowa state medical examination at the end of their first or second year of work. One of the difficulties is finding men who speak English.

Secretary of State Melvin Synhorst, who attended a recent conference on displaced persons at St. Paul, Minn., said 40 psychiatrists are available in European displaced persons camps who have been unable to find persons to sponsor their entrance into the United States. When Edwin Armstrong, executive director of the National Emergency Council of Displaced European Professionals, conferred with Iowa officials during October, he declared, "Surveys show the best medical brains of Europe are still in displaced persons camps."

This condition, despite the crying need for psychiatrists and physicians everywhere, not only in Iowa, is brought about because of the difficulty of licensure. A licensure examination is limited in determining whether a physician is adequately prepared to practice medicine, and the boards have depended upon the evaluation of the medical schools by the Council on Medical Education and Hospitals of the A.M.A. and the Association of American Medical Colleges. Lacking this information on foreign medical schools, licensing boards have been reluctant to admit their graduates. European schools are now being investigated, and, when the report becomes available, the licensure boards will be able to utilize their findings in determining the fitness of these foreign graduates, and the thousands of skilled doctors who are still idle four years after the end of the war may again practice their profession.

In the meantime, however, their skill is needed. While no broad general policy regarding their admittance should be made until the information on medical schools is available, it would seem that the need makes the effort to evaluate these men on an individual basis well worth the inherent difficulties in so doing. The State Board may be depended upon not to license anyone who is not qualified, and they are to be commended for giving these foreign medical graduates the opportunity to prove their ability to meet the requirements in other ways.

Attitude of VD Patients Toward Clinics and Rapid Treatment Centers

During 1947 seven states participated in a study of the attitude of venereal disease patients toward clinics and rapid treatment centers, sending in a total of 1,668 questionnaires by the end of 1948.* The questionnaire was simple and designed to establish an attitude scale by cross tabulation within itself and between the two groups. There was no selection of patients, and no names were requested on the form, thus insuring complete privacy. The fact that the reactions on a whole were quite favorable is encouraging, but an evaluation of the data may stimulate improvement of the services.

Less than half of the patients who were questioned listed criticisms, there being more complaints against the rapid treatment centers than the clinics. Only 10 per cent of the criticisms were directed at persons at the treatment center against 16 per cent at the clinics.

Over one third of the criticisms directed at clinics were in regard to the handling of patients, the major complaint being having to wait too long in line. The greatest objection to the treatment centers was the food, with personal and physical conditions named almost as often. Both of these major complaints offer some possibility of remedy, even if only indirectly; for example, the waiting time may be made to seem shorter by providing reading material or music, if it is financially impossible to correct the situation directly.

About one fifth of the criticism in both groups was the treatment itself, half of this group complaining that it hurt. Other objections were "takes too long," "no good," "type of treatment," and "posttreatment observation too long."

The remainder of the criticism of the clinics referred to the physical and personal conditions (19 per cent), patient education (7.7 per cent), clinic hours (7.7 per cent) and other miscellaneous items.

Of the patients criticizing the rapid treatment centers, 16 per cent did not like the policies in regard to visitor restrictions, rules and regulations or lack of them, patients having to work and personal liberty. A small percentage objected to the handling of the patients, in large part the personal attitude of the staff and the mixing of races and sexes.

The attitudes in the youngest age group, in both clinics and centers, were about four times as unfavorable as those in the oldest age groups. As these young people may relapse or become reinfected, and their attitudes passed on to contem-

(Continued on page 594)

*Usilton, L. J., and Morse, J. W.: J. VD Information (October) 1949.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WALTER L. BIERRING, Des Moines, *Chairman*

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DR. EVERETT M. GEORGE, Des Moines

JAMES B. KNIPE, M. D.

1881-1949

An Appreciation

Armstrong, Estherville, Emmet County and many people throughout the state and nation are only now recovering from the shock of the tragic death of Dr. and Mrs. James B. Knipe in an automobile accident which took place at the south edge of Estherville, Thursday, October 20, at about 10:15 a. m., while on a medical mission for the State Society.

Dr. James Bolton Knipe was born on Feb. 15, 1881, at New Hartford, Iowa, the son of Jacob M. and Ann Bolton Knipe. He attended New Hartford public school, graduating in 1898, and entered Drake University at the age of 17. He earned his Ph.G. degree in 1900. He entered the University of Illinois and was graduated from the medical college in 1904, where he was a member of Phi Beta Pi medical fraternity. The same year he came to Armstrong, where he practiced medicine actively and continuously for 45 years.

In 1918 he enlisted as a lieutenant in the United States Army and served as a medical officer at Lakewood, N. J. He was an organizer and the first commander of the Duffy-Knipe American Legion Post No. 459. Dr. Knipe was a member of the Armstrong Board of Education and for 20 years a member of the Emmet County Board of Education. Always deriving a great deal of pleasure from his fellowship with his colleagues in the medical profession, he held an active interest in the American Medical Association, the Iowa State Medical Society and was a past president

of the Upper Des Moines Valley Medical Society. At the time of his death he was president of the Emmet County Medical Society and Councilor of the Third District.

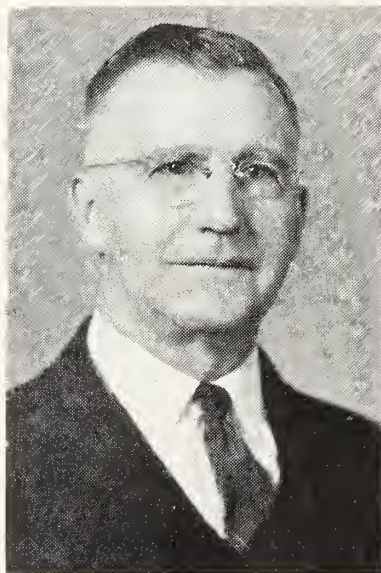
Dr. Knipe was a member of the Eastern Star and a Past Master of the Masonic Lodge. Both Dr. and Mrs. Knipe were long time members of the Methodist Church.

Dr. Knipe started the practice of medicine with a horse and buggy in the days of mud roads, and he saw the progress in transportation along with the progress in medicine. He was an outstanding student of medicine and government and kept abreast of the latest developments in both fields. Friends and patients sought him for moral support as well as physical needs. He gave freely of his time and efforts to make his community a better place in which to live. Dr. Knipe served his profession well for 45 years and ministered to all who called upon him in their time of illness. He also had the best interests of his family at heart and sought to

direct them in paths of right living and higher thinking.

Dr. Knipe and Mrs. Knipe (Grace Stuart) were married on June 1, 1908. Their son Dr. James B. Knipe was killed in action April 12, 1945, at Okinawa. They are survived by three children: Mrs. W. B. Campbell, of Gilmore City, William J. Knipe, of Spencer, and Mrs. William Irwin, of Armstrong, and by six grandchildren.

Mathew T. Morton, M.D.,
Estherville



James B. Knipe, M.D.

NEWS NOTES

from the

Committee on Medical Service and Public Relations

Physicians and lay representatives of the state medical societies met at AMA headquarters in Chicago November 3 to 6, to discuss state society projects. The first two days were confined to subjects related to state journals and the work of state secretaries. The last two days concerned state medical society's public relations and future plans.

Secretaries and Editors Conference

The conference began Thursday morning at 10:00 with Dr. D. W. Macomber, of Denver, Colo., scientific editor, *Rocky Mountain Medical Journal*, as chairman.

Dr. Louis Bauer, Hempstead, N. Y., chairman, AMA Board of Trustees, stated, "The job of educating the medical profession and the public depends a great deal on state society officers, and it is the job of these few select people to direct the activities and functions of the profession in its opposition to governmental regulation and control and in educating the public of the advantages of our present system of voluntary medical care." Dr. Bauer said, "Washington bureaucrats will resort to anything to smear the American Medical Association," and added further that "the medical profession must be always prepared to meet such opposition. As members of the AMA we must stand together if we have any hopes of defeating the drive for control of our individual services." In his opinion doctors who have complaints about the activities of the AMA should file them with the headquarters office and not create dissension and misunderstanding at the local level. These are internal problems that should not be aired publicly.

Dr. Bauer concluded his remarks by commenting briefly on the antitrust investigations that are being conducted under the direction of the Department of Justice. "We are firmly convinced these calls by federal men at the various state medical society offices are being made to bring the medical profession in line with present chaotic political trends through the use of police state tactics."

The meeting was spent almost entirely discuss-

ing ways of improving office operations and better methods of publishing a state journal. Editors and their assistants presented and discussed the manner in which their society publishes a journal.

State medical society secretaries and executive secretaries were given considerable time to discuss their problems. Improving relations between the state society and hospital associations was discussed, and it was suggested that every attempt be made to develop and maintain closer contact with hospitals so that both sources will be aware of existing problems. Mr. C. Rufus Rorem, executive secretary, Hospital Council of Philadelphia, suggested that the medical society officers meet as often as possible with hospital management and form joint committees to iron out misunderstandings. He believes voluntary health insurance should be expanded and made more readily available to the public.

Also discussed was the possibility of combining some of the national meetings to eliminate time and expense in getting to and from them. Judging from the general discussion the only two meetings that it would be advisable to conduct in the same period would be the Medical Society Executives Conference and the Annual Conference of State Medical Association Secretaries and Editors. The general attitude seemed to indicate that the meetings should remain as they are at the present time, but no final decision was made.

Public Relations Conference

The second annual Public Relations Conference convened Saturday morning at 9:30, at AMA headquarters. Over 200 state medical officers, executive secretaries and public relations persons attended.

Dr. George F. Lull, secretary of the AMA, in the address of welcome, said the attendance at this meeting makes it obvious that the medical profession is anxious to continue furthering the various state projects in public relations and that the excellent results of the St. Louis meeting last year made it necessary to hold a similar meeting this year. "The medical profession must not become complacent while the Congress is ad-

journed but must prepare for the months to come," he said. "Proponents of political medicine will not give up until they are soundly defeated, and I feel confident that we of the medical associations can do a great deal in bringing about this defeat."

Mr. Lawrence W. Rember, AMA public relations director, then outlined the two day program and turned the meeting over to the chairman for the morning session, Dr. Max M. Hattaway, chairman, Council on Medical Service and Public Relations, Louisiana State Medical Society. The morning speakers were Dr. Donald B. Koonce, North Carolina Medical Society; Dr. Percy E. Hopkins, Illinois State Medical Society; and Dr. Charles L. Farrell, Rhode Island Medical Society. These doctors discussed "Organizing the State Public Relations Program at District and County Levels," "Working With All Other Committees of the State Society," and "Cooperation Desired by Public Relations Committees From State Society and AMA Headquarters." These are some of the steps that should be taken according to the discussants:

A. (1) Develop a public relations program according to the local county needs.

(2) Establish a state public relations committee and a public relations council at the district level.

(3) Educate the doctors individually. Sell your public relations' program to every physician in the state.

(4) Coordinate the activities of all the public relations committees.

(5) Furnish material the doctors can use effectively.

(6) Publish a periodical pamphlet on activities.

(7) Conduct a poll among the public on the subject of socialized medicine.

B. (1) Develop a well organized speakers bureau.

(2) Give lay people a chance to assist in the educational campaign.

(3) Designate a spokesman in each county as a contact for the press and radio.

(4) State medical offices should be adequately financed to assure sufficient clerical help.

(5) Give the county spokesman broad powers so he will be able to function properly in releasing information.

Many of these projects have been undertaken by the Iowa State Medical Society, which no doubt will expand into some of the others when the committee deems the time is right.

The afternoon session began at 1:30, with a new chairman presiding, Dr. A. E. Cardle, Minne-

sota State Medical Association. The first speaker was Dr. J. H. A. Peck, president, Kansas Medical Society, who discussed "Tackling the Public Relations Problem of Getting Doctors into the Rural Areas." Dr. Peck explained the plan they have in Kansas. He emphasized that the first and most important step is to enlarge the medical schools. In his opinion this alone will do a great deal toward getting the men to set up practice in isolated and extreme rural areas.

Dr. George H. Garrison, president, Oklahoma State Medical Association, spoke on "The Public Relations Value of a Grievance Committee." Dr. Garrison explained the organization and function of the Oklahoma committee and suggested that other states that do not have such a committee take steps toward establishing one. The Oklahoma committee is comprised of five past presidents of the state association who serve as board members. The committee members' names have been announced publicly, and action of the board is made available to the press and radio. Public response to the formation of this board of review has been excellent, and most of the profession of Oklahoma is happy with the work of the grievance committee. A complaint is handled in the following manner: The person having a complaint files it with the state medical society office, and a copy of the complaint and letter goes to the physician involved, suggesting that he and the patient get together and attempt to iron out the difficulty without the state committee stepping in. A letter is also mailed to the person filing the complaint, keeping him informed of action taken. If after 10 days no action has been taken, another letter is mailed, and, if no response then, the doctor and the patient are requested to appear before the committee. Dr. Garrison believes it has already proved its worth in that a dozen cases have been settled without board action. The very fact that the committee exists seems to provoke action by the patient and the doctor.

Dr. McKinnie Phelps, Colorado State Medical Society, discussed "Press and Radio Relations for County Societies and Individual Doctors." The Colorado State Medical Society was the first state society to draft a code of ethics for the purpose of clarifying the position of medicine, press and radio. Dr. Phelps, as well as one of the morning speakers, suggested that a contact man be established at the county level so the press and radio can clear material through a local medical man, which is a provision in their code of ethics.

Dr. C. Allen Payne, chairman, advisory committee to the Michigan Woman's Auxiliary, spoke concerning "Full Utilization of the Woman's Auxiliary as a Public Relations Force." Dr. Payne

suggested the following projects for the women: (1) Active part in local health programs, (2) Solicit subscriptions to *Hygeia*, (3) Activate a tuberculosis speaking-project, (4) Sponsor a health month, immunization month, (5) Assist voluntary health agencies, (6) Take part in the hospital guild, (7) Assist with school health programs, (8) Promote voluntary health insurance.

Dr. Payne suggested that in planning programs the auxiliary should discuss them with the doctor so that he will have an understanding of what is being accomplished. "Arrange your programs to be flexible," he said.

"In order to accomplish some of the things I have suggested it will be absolutely necessary that you first have a well organized county unit and that you hold regular meetings. Without complete understanding and cooperation among the women at the local level no program will succeed." He believes a liaison should be maintained between the county and state auxiliary organization and that joint meetings between the physicians of the county medical society and the county auxiliary should be held whenever possible. "The wives can accomplish a lot by educating their husbands concerning social and economic problems that confront them in their auxiliary activities." He said that the auxiliary members, when well informed, will play a large part in defeating compulsory health insurance.

Sunday morning the meeting was entitled, "Get It Off Your Chest," and many did just that. Members were asked to air their views concerning county, state and national medical activities. Several representatives outlined programs that are being conducted in their particular state.

The Iowa delegation felt the meetings were worthwhile and that much was accomplished.

Donald L. Taylor

CLINICOPATHOLOGIC CONFERENCE

(Continued from page 571)

unattended by headache, nausea, vomiting and papilledema. There will, in short, be nothing in the case history which directs one's attention to the head. As the tumor increases in size, it may gradually encroach upon that part of the cerebral circulation upon which the integrity of the cortical projections to the upper extremities depends.

In the case presented today there was ample evidence to indicate that the lesions of the spinal cord were responsible for the disabilities of the upper and lower extremities. During the patient's living state, however, it would not have been quite so easy to be certain of this point. The wary diagnostician will continually bear in mind the basic principle that neurologic signs

and symptoms are as they are because of disturbances in the neurophysiologic mechanism. When, as in most instances, the neurologic mechanism is extensively distributed throughout the brain and spinal cord, it becomes essential for the diagnostician to consider all parts of the mechanism as possible sites. Under such circumstances he will reject elemental rules of thumb and proceed to press all relevant diagnostic measures into service.

Dr. Sahs: In summary, the age of onset of this man's disease is rather late for multiple sclerosis. Ordinarily this condition begins in the twenties or thirties; seldom does it commence at the age of 45. However, we have observed occasional cases beginning at a later age. Multiple sclerosis usually occurs in individuals who are otherwise quite healthy. Throughout the course of their illness they do not present the appearance of systemic illness unless complications make their appearance. All special laboratory procedures directed toward determining the cause of the disease have thus far been disappointing. The old Charcot triad of nystagmus, scanning speech and intention tremor no longer characterizes the typical picture of multiple sclerosis, particularly in the early stages of the disease. The early manifestations are usually those which this man exemplified. Spastic lower extremities, paresthesia, double vision and painless loss of vision in one or both eyes are often the earliest symptoms. The clinical course is extremely variable. The remitting type is often seen, but we observe many examples of the chronic progressive type. Occasionally the acute type results in death within a period of several weeks or months. Death is usually produced by complications of the disease however. Bedsores, infection of the urinary tract or a complication such as this patient experienced are usually responsible for the fatal result after long periods of incapacity.

The treatment of multiple sclerosis has not reached a stage such as to be considered specific for the condition. Vitamins, histamine phosphate and etamon are in vogue, but, until we learn more about the cause of this disease, therapeutic measures will continue to be disappointing.

BIBLIOGRAPHY

1. Feil, H.: Preliminary pain in coronary thrombosis. *Am. J. Med. Sc.*, cxciii:42-48 (January) 1937.
2. Bean, W. B.: Infarction of heart; clinical course and morphological findings. *Ann. Int. Med.*, xii:71-94 (July) 1938.

CHANGE OF ADDRESS

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the Journal, 505 Bankers Trust Bldg., Des Moines 9, Iowa.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

AN ATLAS OF AMPUTATIONS—By *Donald B. Slocum, M.D.*, M.S., Orthopaedic Surgeon, Sacred Heart General Hospital, Eugene, Ore.; Member, American Academy of Orthopaedic Surgeons and American Society for Surgery of the Hand; Branch Consultant in Orthopaedic Surgery, U. S. Veterans Administration; Formerly Chief of Amputation Section, Walter Reed General Hospital, Washington, D. C. St. Louis, The C. V. Mosby Co., 1949. Price \$20.00.

AN ATLAS OF THE BLOOD AND BONE MARROW—By *R. Philip Custer, M.D.*, Director, Laboratories of the Presbyterian Hospital, Philadelphia; Assistant Professor of Pathology, The University of Pennsylvania School of Medicine; Consultant to the Armed Forces Institute of Pathology, Philadelphia and London, W. B. Saunders Co., 1949. Price \$15.00.

CLINICAL EXAMINATION OF THE NERVOUS SYSTEM—By *G. H. Monrad-Krahn, M.D., F.R.C.P.*, Professor of Medicine, Royal Frederick University, Oslo; Physician-in-Chief to the University Clinic for Nervous Diseases, Oslo; Consulting Physician to the Epileptic Colony of the Norwegian State. Ninth Edition. New York, Paul B. Hoeber, Inc., 1949. Price \$5.00.

DIAGNOSIS AND TREATMENT OF BRAIN TUMORS AND CARE OF THE NEUROSURGICAL PATIENT—By *Ernest Sachs, A.B., M.D.*, Research Associate in Physiology, Yale University, New Haven; Formerly Professor of Clinical Neurological Surgery, Washington University School of Medicine, St. Louis. Second Edition. St. Louis, The C. V. Mosby Co., 1949. Price \$15.00.

DISEASES OF THE HEART—By *Charles K. Friedberg, M.D.*, Associate Physician, Mount Sinai Hospital, New York;

Lecturer in Medicine, Columbia University. Philadelphia and London, W. B. Saunders Co., 1949. Price \$11.50.

ESSENTIALS OF OBSTETRICAL AND GYNECOLOGICAL PATHOLOGY—By *Robert L. Faulkner, M.D., F.A.C.S.*, Assistant Professor of Gynecology, The Western Reserve Medical School; Associate Gynecologist, University Hospitals of Cleveland, Ohio. And *Marion Douglass, M.D.*, Formerly Assistant Professor of Gynecology, The Western Reserve Medical School. Second Edition. St. Louis, The C. V. Mosby Co., 1949. Price \$8.75.

THE EYE AND ITS DISEASES by 92 International Authorities—Edited by *Conrad Berens, M.D., F.A.C.S.*, New. Second Edition. Philadelphia and London, W. B. Saunders Co., 1949. Price \$16.00.

LIFE AMONG THE DOCTORS—By *Paul de Kruif*, in Collaboration with *Rhea de Kruif*. New York, Harcourt, Brace and Company, 1949. Price \$4.75.

MAY'S MANUAL OF THE DISEASES OF THE EYE—Edited by *Charles A. Perera, M.D.*, Assistant Clinical Professor, College of Physicians and Surgeons, Columbia University, New York; Associate Attending Ophthalmologist, Presbyterian Hospital, New York. Revised, Twentieth Edition. Baltimore, Williams and Wilkins Co., 1949. Price \$5.00.

NORMAL VALUES IN CLINICAL MEDICINE—By *F. William Sunderman, M.D., Ph.D.*, Professor of Experimental Medicine and Clinical Pathology, University of Texas Postgraduate School of Medicine. And *Frederick Boerner, V.M.D.*, Late Associate Professor of Clinical Bacteriology, Graduate School of Medicine, University of Pennsylvania. Philadelphia and London, W. B. Saunders Co., 1949. Price \$14.00.

BOOK REVIEWS

ATLAS OF ROENTGENOGRAPHIC POSITIONS

By *Vinita Merrill*, while Educational Director, Picker X-Ray Corporation. In two volumes. St. Louis, The C. V. Mosby Co., 1949. Price \$36.00.

This two volume work is industriously compounded in the best manner. Each section is prefaced by a general discussion of the problems of anatomy, apparatus, room and patient arrangement as well as technic.

Each region is completely covered in positioning. Nearly every position has not only photographic but also sketch illustrations. This atlas is easily the finest of its kind that has come to my attention.

H. J. P.

PRACTICAL ASPECTS OF THYROID DISEASE

By *George Crile, Jr., M.D., F.A.C.S.*, Department of Surgery, Cleveland Clinic. Philadelphia and London, W. B. Saunders Co., 1949. Price \$6.00.

This book is an excellent summary of our knowledge of the thyroid gland as to both its medical and, in particular, its surgical aspects. The author discusses the physiology and pathology of the gland as well as the etiology, diagnosis and preoperative preparation of thyrotoxic, nontoxic and carcinoma patients. A worthwhile discussion is presented on operative and postoperative complications.

The author has presented a complex subject in a short, concise and instructive manner.

W. H. M.

CLINICAL AUSCULTATION OF THE HEART

By *Samuel A. Levine, M.D.*, Clinical Professor of Medicine, Harvard Medical School; Physician, Peter Bent Brigham Hospital. And *W. Proctor Harvey, M.D.*, Research Fellow in Medicine, Harvard Medical School; Assistant in Medicine, Peter Bent Brigham Hospital. Philadelphia and London, W. B. Saunders Co., 1949. Price \$6.50.

Too many physicians carry a stethoscope more as a badge of office than as a working tool. While their teachers berate them for neglecting the evidence to be obtained by inspection, palpation, percussion and auscultation, the practitioners continue to seek diagnostic infallibility in mechanical and electrical instruments and machines.

Here is a little book which represents an earnest and eloquent effort to redirect the doctor's attention to the importance of simple and fundamental procedures in the physical examination of the heart. In 290 pages of text and almost as many illustrative figures, the intricacies of normal and abnormal heart sounds are unraveled by a master clinician and teacher. Sound-tracings illustrate each point in the discussion; this is bedside teaching brought to the doctor's easy chair.

This book ought to induce every physician who reads it to re-discover the use of his stethoscope. Instead, alas, it will probably lead many a reader to purchase a sound-recording attachment for his electrocardiograph.

H. J. S.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

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LINES FROM THE PRESIDENT

The 1949 conference of state presidents, presidents-elect and national chairmen of standing committees of the Woman's Auxiliary to the A.M.A. met in Chicago November 3 and 4. The conference theme was "The A.M.A. 12 Point Program," with special emphasis on the role of the Auxiliary in promoting this program which is built around the health interests of the people.

A complete report of the speakers, Dr. Andrew C. Ivy, vice president of the Illinois Professional Schools, Mr. Fred V. Hein, who discussed the school health program, Mr. Lawrence Rember, director of the Department of Public Relations of the A.M.A., Mr. Thomas A. Hendricks, secretary of the Council on Medical Service of the A.M.A., and Dr. James R. Miller, who spoke on the commission of chronic illnesses, appears in the December issue of *The Bulletin*.

All of the speakers urged doctors' wives throughout the country to carry out the program of the Woman's Auxiliary with its related projects and to work at public relations and legislation even more forcefully than in the past. We are urged to co-operate in health planning units, to insist that local medical facilities are adequate, and to aid in interesting doctors to locate in rural communities.

The exchange of ideas with the other 43 state presidents and the opportunity to discuss their programs and public relations projects along with efforts concerning current legislation contributed greatly toward making a worthwhile conference. The county presidents will be hearing directly concerning the results of this interchange of ideas.

Mrs. Roger M. Minkel

CANCER FUND FACTS

The 1949 campaign for the American Cancer Society in Iowa has been an outstanding success.

Seventy-nine counties had gone over the top when the campaign officially closed August 31, and nine of these counties more than doubled their assigned quotas.

A total of \$418,360.21 was contributed, which is an all time high for cancer contributions in Iowa, and is \$116,460.21 more than the state's assigned quota of \$301,900, or 138 per cent.

HOW YOUR CANCER DOLLAR IS SPENT

"What becomes of my dollar when I give it to the American Cancer Society?"

A fair question, and one that many Iowa people who contributed so generously to the 1949 cancer campaign have a right to ask. So, let's take your dollar and see where it goes.

You gave it first to a volunteer solicitor who turned it in to his county campaign chairman; the county chairman takes a tiny little bit out for his campaign expenses, postage, travel, printing and such items. Then it is sent to the state office of the Iowa division at Mason City, where it receives its first processing.

25 Cents is sent to the National Society for research work at the national level, and

3 Cents is earmarked for research expenses in the state.

15 Cents is sent to National to pay for literature, films, recordings, displays, administration and other services at the national level.

25 Cents is set aside for the educational and service programs in the counties, and is allocated to the counties on the basis of need and population. This amounts to about half the funds that are retained in the state (60 per cent of the gross contributed).

21 Cents is put in a fund to promote the educational program, lay and professional, in the state.

4.5 Cents is needed for the administration of the state office, and

4.5 Cents is used to conduct the annual fund raising campaign.

2 Cents is put in reserve, to cover unexpected contingencies, and all monies not used, as allocated above, are expended for research in the state or for the purchase of necessary equipment.

From reserve funds previously held the Iowa division has given more than \$80,000 to the State University to equip and maintain its research laboratory at Iowa City.

One thing that may be said for the Iowa division of the ACS: It is in a manner of speaking always broke; no large reserve funds are allowed to accumulate; the money it receives is put to work in an earnest effort to help solve the riddle of cancer, to educate our people, doctors, nurses and laymen that more cancer cases can be cured, and to lend comfort and alleviate suffering to those afflicted.

FORTY FELLOWSHIPS AWARDED

The American Cancer Society has just awarded 40 one year research fellowships to help young scientists explore the causes of cancer and to seek new ways of treating the disease.

The fellowships—20 new and 20 renewals—total \$148,000. They will enable the investigators to train under the guidance of outstanding scientists in promising avenues of cancer research.

New Horizons, September, 1949

PROGRAM MATERIAL

The following program material is available at Auxiliary Headquarters, 629 11 Ave. North, Fort Dodge, Iowa:

Voluntary Prepayment Medical Care Plans
Brief History of the Attitude of the A.M.A. toward Voluntary Health Insurance
Programs for the Improvement of Rural Health
School Health Policies, Suggested
Community Health Councils, A.M.A. material
Community Health Planning, Iowa Council for Better Education
Pro and Con "Shall We Have Compulsory Health Insurance?"

Recommended Books:

Felix Morley: *Power of the People*
John T. Flynn: *The Road Ahead*

ACTIVITIES OF COUNTY AUXILIARIES

Following dinner with the doctors, the Delaware County Auxiliary held its regular meeting at the Glen Charles October 17. Miss Phyllis Hughes, attorney, who spent a year in Germany on international affairs, was guest speaker. She discussed health conditions in Europe.

Mrs. B. H. Byers

The Woman's Auxiliary to the Polk County Medical Society met October 21 for luncheon at the Standard Club in Des Moines. Mrs. Keith M. Chapler, of Dexter, reviewed the book by Mary Bard, *The Doctor Wears Three Faces*. There were 52 members present.

Mrs. W. B. Chase, Jr.

The Wapello County Auxiliary is sponsoring a nurse in training for whom they have paid tuition and bought books and uniforms. A turkey dinner to raise funds for this project was held November 20. A Public Relations Committee has been appointed from the Auxiliary to cooperate with a similar committee from the Medical Society. As a district councilor, Mrs. E. B. Howell went to Fairfield to assist in the organization of the Jefferson County Auxiliary.

Mrs. E. B. Howell

Dr. Alcock, president of the Iowa State Medical Society, and Dr. Thornton, president-elect, emphasized the importance of Auxiliary activity in the crusade against socialized medicine at a dinner meet-

ing of the Seventh Councilor District held at the Community Hall in Monticello on August 25.

From an Auxiliary standpoint, the past year has been most gratifying in that the State Medical Society has sought and encouraged the type of work which the Auxiliary is equipped to do.

Mrs. R. L. Knipfer

A REMINDER

Extra copies of the "Woman's Auxiliary News" may be obtained by writing to Mrs. K. M. Chapler, Publications Chairman, Dexter, Iowa.

BRIEF OBSERVATION

"This is the most social-minded Congress with respect to the introduction of bills dealing with medical and health legislation in the history of our republic. Nearly 300 such measures were introduced, and more testimony and activity on the part of the medical profession was in evidence than in any prior year. Only one bill, S.614, Amendment to the Hospital Construction Act, was passed and becomes Public Law No. 380. There will remain on the agenda for early consideration next year several bills which constitute a threat to the continued free practice of medicine. This requires that vigorous steps be taken to safeguard not only the medical profession but the public and our free form of government."

Joseph S. Lawrence, M.D., Director
Washington Office, A.M.A.

DID YOU KNOW?

The British government already controls the country's airlines, railroads, coal mines, utilities and the Bank of England as well as medicine?

By way of contrast, there are 8,500 pension plans organized by private business concerns for their employees in the United States. These provide retirement pay, hospitalization, disability and other benefits. Voluntary plans, though established less than 20 years ago, cover an estimated 61,000,000 people or about 40 per cent of the population for prepaid hospital care.

Insurance Economics Surveys

Virgil White, a student of Iowa State College, who visited the Scandinavian countries last summer as a guest of the Lederle Laboratories division of the American Cyanamid Co., makes the following observation on Sweden:

"In Sweden, I also felt that the process of leveling off everybody into the monotonous pattern of the welfare state was well under way. This process seems everywhere to be accompanied by a loss of the spirit of adventure and of the courage of the individual to act for himself."

Des Moines Register, Oct. 31, 1949

Craft and Hobby Sales . . .



Two county medical auxiliaries of the Iowa State Medical Society have been busy these past few weeks in displaying, marking and selling articles made by the handicapped, in cooperation with the Iowa Society for Crippled Children and Adults. The first of these two sales was held at Roshek's department store in Dubuque, with Mrs. A. G. Entrenger as chairman, with the cooperation of Mrs. Joseph W. Lawrence, president of the Woman's Auxiliary of the Dubuque County Medical Society.

The accompanying picture shows members of this group very active in marking these articles for display. The sale of handicraft by the handicapped was started by a tea opened to the public on Friday, October 21, at which Mrs. Roger Minkel, state president of the Auxiliary, was present, as well as Mrs. J. E. Whitmire, chairman of the crippled children's committee of the State Medical Society Auxiliary.

As a result of this sale, over \$1,409.62 worth of articles were sold. The sale was from Friday, October 21, to Saturday, November 5, with members of the Dubuque County Medical Society Auxiliary serving as sales personnel, exhibiting committee, public relations, publicity, and also cooperating in radio broadcasts.

A tape recording was made of the tea by radio station KDTH in Dubuque. The general chairman of the sale as well as Mrs. Minkel had an opportunity to express the willingness and enthusiasm of the Auxiliary in a project of this type. This project was conceived by the State Medical Society Auxiliary in cooperation with the staff of the Iowa Society for Crippled Children and Adults.

This service is unique in that all of the articles sold are made by severely handicapped adults who are residents of Iowa. Many of these individuals would never have an opportunity to market their handiwork without such sponsorship. Instructions and suggestions as to types of articles that can be made for a sale of this type are given by the field

personnel of the Crippled Children's Society. All of the articles are sent to their state headquarters at 2917 Grand Avenue, Des Moines, and from there the articles are transported to the various sales. Among the articles displayed at these two sales were children's stocking caps, pillow cases, scarves (made by Bert Doran, of Boone, who was blinded in the Southwest Pacific during World War II), and the articles made by Miss Leta Larson, of Storm Lake, who has creeping paralysis, which are leather work, chipped carving, hot pads, tea towels, shell jewelry, paper foil jewelry and other novelties.

The other sale was held at Younker-Davidson's store in cooperation with the Sioux Med-Dames Auxiliary for the Woodbury County Medical Society Auxiliary. Their sale was held November 10, 11, and 12. As a result of their efforts, \$710.59 worth of articles were sold. Assisting Mrs. Wayland K. Hicks, president of the Sioux Med-Dames, was Mrs. Maria Jane Hefferman. One of the most novel articles shown at the Younker-Davidson Sioux City sale was a laughing-crying doll made by Imogene Saunders of Manilla. The doll typifies the attitude of the handicapped, according to Mrs. Hefferman: "If the sale of these articles is a success there will be a smile on the faces of Iowa's handicapped, but if the response to these sales is poor the handicapped will be broken hearted and therefore will be crying."

The next sale is to be held in Des Moines in early spring in cooperation with the Polk County Medical Society Auxiliary. It will be followed by the sale of articles at Waterloo by the Black Hawk County Medical Society Auxiliary. Mr. W. I. Griffith, president of the Iowa Society for Crippled Children and Adults, expresses to the Medical Society his appreciation of their interest in sponsoring projects of this type. He explained to the Auxiliary that this is the only means of support for many of Iowa's handicapped, and that this Christmas will be much brighter as a result of their efforts.

SOCIETY PROCEEDINGS

MEETINGS

Black Hawk

At the regular meeting of the Black Hawk County Medical Society November 15 at the Elks Club in Waterloo, nominations were made for the 1950 officers. Dr. Gunnar Gunderson, of LaCrosse, Wis., a member of the AMA Board of Trustees, spoke on "Internal Affairs of the AMA."

Buena Vista

Dr. Lewis E. January, of Iowa City, spoke on "The Cardiac Patient as a Surgical Risk" at a meeting of the Buena Vista County Medical Society in Storm Lake on October 20.

Clinton

The Clinton County Medical Society at a recent meeting appropriated \$1,500 for student nurse scholarships in Clinton nurses schools. Loans, which are to be repaid, are made to students up to \$250 to assist them in acquiring training.

Delaware

The Delaware County Medical Society met with its Auxiliary on October 17 at the Glen-Charles Hotel in Manchester. Following dinner, separate meetings were held. Mr. Ralph P. Creer, of Chicago, secretary of the AMA Committee on Motion Pictures, presented a film on cancer, assisted by Dr. Clarence J. Mikelson, of Waterloo. Also on the program were Dean Bruce E. Mahan, Lee W. Cochran and John R. Hedges, all of SUI's Extension Division.

Johnson

The Johnson County Medical Society met November 2 at Oakdale Sanatorium. Dr. William E. Adams, professor of surgery at the University of Chicago, spoke on "Indications for Pulmonary Resection," following dinner and a business meeting.

Linn

Dr. Howard K. Gray, head of the division of surgery at Mayo Clinic and professor of surgery in the University of Minnesota Graduate School of Medicine, discussed "Problems Associated with Operations on Gastric and Duodenal Ulcers" at the dinner meeting of the Linn County Medical Society November 10 at the Roosevelt Hotel in Cedar Rapids. Discussion was led by Drs. R. Y. Netolicky and Harold O. Jirsa, of Cedar Rapids.

Pottawattamie

The Pottawattamie County Medical Society met October 18 at the Hotel Chieftain in Council Bluffs.

Honored at the dinner meeting was Dr. Christine Ericksen-Hill, who is retiring. Dr. Thomas Perry Williams, of Omaha, area director of the Red Cross Blood Bank, discussed recent advances in the use of blood and its derivatives to fight disease.

Scott

Dr. Carl H. Matthey was chosen president for 1950 of the Scott County Medical Society at a meeting November 1 at the Lend-a-Hand Club in Davenport. Dr. Paul White was named president-elect. Other newly elected officers are Dr. H. M. Hurevitz, vice president; Dr. H. B. Weinberg, secretary; Dr. F. Dale Wilson, treasurer; Dr. W. S. Binford, historian; Dr. W. C. Goenne, delegate; and Dr. Harry Lamb, alternate delegate. Chosen to serve on the executive committee were Drs. P. E. Gibson, W. J. Balzer, M. J. Brown, T. W. McMeans and R. A. Berger. Guest speaker at the meeting was Dr. Joseph Cady, of Sayre, Pa., who spoke on "Disease of Veins and Arteries."

Shelby

At a meeting of the Shelby County Medical Society on October 5, Dr. R. O. Ruch, of Omaha, gave a talk, using lantern slides, on "Common Dermatological Disorders; Their Diagnosis and Treatment."

At the October 14 meeting, it was unanimously decided to recommend to the executors of the Chris Myrtue Estate that a hospital of approximately 40 beds be built with the \$200,000 left for this purpose. The members also went on record as believing the present insurance fees are inadequate and recommended that the following fee schedule be adopted: Long Form, \$7.50; Short Form, \$5.00; and Letter of Information, \$2.50.

On October 24 the Society entertained at a dinner the executors of the Chris Myrtue Estate, the local members of the temporary planning committee for the hospital and the editor of the local newspaper.

Sixth Congressional District

Congressman James I. Dolliver, of Fort Dodge, who recently returned from England and the Scandinavian countries, where he studied the working of government medical plans, spoke at a meeting of the Sixth Congressional District on October 26 at the Hotel Warden in Fort Dodge.

Washington

Washington County Medical Society members entertained their wives and guests at a dinner held in Wellman on October 20. Colonel (Ret.) Jack J. Hinman, of Iowa City, was the main speaker. His talk on Japan and Islands in the South Pacific was illustrated with colored slides.

Winneshiek

The annual meeting of the Winneshiek County Medical Society was held at the Winneshiek Hotel in Decorah on October 11, at which meeting officers were elected for 1950.

Woodbury

The regular dinner meeting of the Woodbury County Medical Society was held November 17 at the Mayfair Hotel in Sioux City. Dr. Graham Asher, of Kansas City, Mo., gave an address on "Diagnosis of Coronary Heart Disease Before Occlusion."

PERSONALS

Dr. Robert B. Allender, who was graduated from SUI College of Medicine in 1946, has opened an office in Marion for general practice. Dr. Allender served a 15 month internship at the Cincinnati (Ohio) General Hospital and for two years was at the U. S. Army Hospital in Spokane, Wash.

Dr. William B. Bean, head of the department of internal medicine at SUI, was elected vice president of the Central Society for Clinical Research at a meeting in Chicago in November. **Dr. Murray Franklin**, associate in the department of internal medicine, was elected a member of the society. Both doctors presented research papers at the meeting.

Dr. W. Gordon Doss, who has been practicing in Mount Ayr for the past 18 months, has become associated with Dr. Elmo E. Gamet in Lamoni for general practice and surgery.

Dr. Richard H. Fair, of Pittsburgh, Pa., has become associated with Dr. John S. Deering in Onawa. Dr. Fair is a graduate of the University of Pittsburgh Medical College and served with the medical corps of the air force in Alaska during the war.

Dr. Harley G. Feldick has joined the staff of the Dolmage Hospital, returning to his native city of Buffalo Center from Elkins, W. Va. Dr. Feldick was graduated from SUI College of Medicine in 1945 and served his internship at St. Luke's Hospital at Duluth, Minn. He was two years in army service, for the greater part of the time at the Veterans Administration Hospital at Fargo, N. D.

Dr. Leon J. Galinsky, of Des Moines, spoke on "Unexpected Tuberculosis in Elderly Persons" at the semi-annual meeting of the Woodbury County Tuberculosis and Health Association in Sioux City on October 21.

Dr. Charles C. Griffin has announced the opening of an office in Dyersville. Born at Fort Leavenworth, Kan., Dr. Griffin was graduated from SUI College of Medicine in 1946. He recently completed a residency in surgery at the U. S. Marine Hospital in Chicago.

Dr. David Haufe has joined the staff of the Gilfillan Clinic in Bloomfield as a specialist in internal medicine. Originally of Warsaw, Wis., Dr. Haufe was graduated from the University of Wisconsin College of Medicine in 1943 and served his internship at the Kansas City Research Hospital. During World War II Dr. Haufe served as medical officer on the U.S.S. New Mexico.

Dr. Harris Heise, of Marshalltown, was elected president of the Marshall County Public Health Council at a meeting held October 25.

Dr. Harold A. Housholder, of Winthrop, spoke on "Socialized Medicine" at a community-wide meeting October 24 sponsored by the Woman's Literary Club.

Dr. John L. Hoyt, a native of Greenfield, has opened an office in Creston for general practice. A graduate of SUI College of Medicine, Dr. Hoyt took his internship at the Toledo (Ohio) Hospital and recently completed two years duty with the army air force.

Dr. Mark A. R. Kuhn has opened an office in Waterloo for the practice of urology. A native of Decorah, Dr. Kuhn was graduated from SUI College of Medicine in 1944 and has practiced the past year in Miami, Fla.

Dr. Gerald E. Larson, coming from a hospital staff position in Tallahassee, Fla., has opened an office in Elk Horn. Dr. Larson was graduated from the College of Medical Evangelists, in Los Angeles, Calif., and interned there at White Memorial Hospital.

Dr. P. J. Leinfelder, of SUI College of Medicine, was a member of a group of five doctors who received first award for their scientific exhibit on ophthalmology at the annual session of the American Academy of Ophthalmology and Otolaryngology in Chicago in October.

Dr. James R. Mason, a 1945 graduate of Yale University Medical School, New Haven, Conn., has begun the practice of general medicine in Ainsworth. Dr. Mason has served three years with the U. S. Public Health Service, serving part of the time in Shanghai, China, and Hawaii.

Dr. John C. McKittrick, of Burlington, spoke on "Socialized Medicine" at a meeting of the Fort Madison Rotary Club on October 24.

Dr. Herbert C. Merillat, of Des Moines, was the guest speaker at a meeting of the Clear Lake Woman's Club November 8. Dr. Merillat, a psychiatrist, spoke on "Emotional Reactions in the Home."

Dr. Werner P. Pelz, of Nashua, has sold his practice to **Dr. J. H. Ackerman**, who became associated with him in August, and has opened an office in Charles City.

Dr. Charles R. Phelps, of Ottumwa, has successfully passed his examinations and become a diplomate of the American Boards of Pathological Anatomy and Clinical Pathology.

Dr. Gerald R. Rausch served on the panel of the Sioux City Council of the P.-T.A. for its meeting October 3. He discussed "Freedom to Grow with Health and Happiness—Relation of Children's Behavior Problems to Future Mental Health."

Dr. Rausch also gave a talk on "Mental Health" at the annual convention of the Federation of Women's Clubs of Dixon-Dakota counties of Nebraska on October 11 at South Sioux City, Neb.

Dr. George A. Scott, of Los Angeles, Calif., has announced his plans to open an office in Ireton. Dr. Scott practiced in Sioux City for 11 years before moving to California and has done postgraduate work at Mayo Clinic and John Hopkins Hospital.

Dr. Otto C. Stegmaier, who recently completed two years at the Mayo Clinic section of dermatology, has opened offices in Davenport. A native of Jefferson City, Mo., Dr. Stegmaier was graduated from St. Louis University Medical School and served his internship in that University's group of hospitals. In September 1944 he began service with the United States Navy. He has taken special training in dermatology at Northwestern University Medical Clinics and the University of Illinois College of Medicine.

Dr. Glenn L. Walker has been appointed temporary acting head of the ophthalmology department at SUI College of Medicine.

Dr. Lily Kinnier Haisch and **Dr. Frank W. Meyers** were presented with medals conferring life membership by the Dubuque County Medical Society at a testimonial dinner at Bunker Hill on November 8. Both have practiced for 50 years.

Dr. Frederick L. Nelson and **Dr. David L. Rater**, of Ottumwa, have been elected "certified fellows" of the International College of Surgeons.

Dr. Charles H. Cretzmeyer, Sr., has been named to head the staff of the newly completed St. Ann's Hospital at Algona. **Dr. Thomas J. Egan**, of Bancroft, was elected vice president and **Dr. M. G. Bourne**, of Algona, secretary. Also on the executive board will be **Dr. Robert W. Lee**, of Algona, and **Dr. John G. Clapsaddle**, of Burt.

DEATH NOTICES

Ashby, Atchison Almond, 88, died November 9 at his home in Sioux City. Born in Illinois, Dr. Ashby was graduated from Rush Medical College in 1883. He first practiced in Red Oak, moving to Sioux City in 1916. He retired in 1939. He was a life member of the Woodbury County and Iowa State Medical Societies.

Hawkins, Emmet L., 62, retired radiologist, died October 15 at his home. Born in Humboldt, Neb., Dr. Hawkins was graduated from Creighton University Medical School in 1912 and served his internship at St. Alex's Hospital, at Cleveland, Ohio. He entered practice in Mineola in 1914 and in 1917 took a postgraduate course in radiology at Cornell University, Ithaca, N. Y. After serving in the army in World War I, Dr. Hawkins came to Council Bluffs in 1919, where he was radiologist for three local hospitals until he retired in 1940. However, during World War II he was head radiologist at Northern Permanente Hospital, Kaiser Ship Building Corporation, Vancouver, Wash. Dr. Hawkins was a member of the Pottawattamie County and Iowa State Medical Society until last year.

Kaack, Harry F., 68, died at his home in Clinton on November 1. Born in DeWitt, Dr. Kaack was graduated from the Hahnemann Medical College, Chicago, in 1910. He practiced medicine in DeWitt and Elvira before going to Clinton in 1918. He was a member of the Clinton County and Iowa State Medical Societies.

Knipe, James Bolton, 68, and Mrs. Knipe were killed in an automobile accident on October 20 near Estherville. Dr. Knipe was born in New Hartford and had practiced in Armstrong after receiving his medical degree from the University of Illinois in 1904. Dr. Knipe was a member of the Emmet County and Iowa State Medical Societies.

Lott, Robert Henry, 66, of Carroll, died unexpectedly of a heart attack October 27 while in a car enroute to Davenport. Born in LeRoy, Ill., Dr. Lott was graduated from the SUI College of Medicine in 1913. He practiced in Waverly and Maquoketa and served overseas in World War I before locating in Carroll, where he practiced for a quarter of a century. He was a life member of the Carroll County and Iowa State Medical Societies.

Mahin, Francis Milton, Ainsworth physician for many years until his retirement in 1945, died at his home in Washington on October 29. Born in Indiana, Dr. Mahin was graduated in 1904 from the University of Kentucky Medical School and practiced medicine at Cheney, Kan., in South Dakota, and at Dow City, before settling in Ainsworth. He was a life member of the Washington County and Iowa State Medical Societies.

Noble, Frederick W., 73, died at his home in Fort Madison on November 5. Born in Grosse Isle, Mich., Dr. Noble was graduated from Northwestern University Medical School in 1906. Dr. Noble practiced in Oklahoma, Texas and Arkansas before coming to Fort Madison in 1919, where he practiced until his health failed. Until 1948 he was a member of the Lee County and Iowa State Medical Societies.

(Continued on page 594)

THE JOURNAL

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DEATH NOTICES

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Vesterborg, Peter Hanson, 89, of Forest City, died at his home November 2. Born in Denmark, Dr. Vesterborg came to the United States when he was 25 years old. He was graduated from Rush Medical College of Chicago in 1892 and practiced there for six years before coming to Forest City. He was a life member of the Hancock-Winnebago and Iowa State Medical Societies.

Webb, Wateman T., 63, former Fairfield physician, died November 5 of a cerebral hemorrhage at his daughter's home in Hedrick. Born in West Virginia, Dr. Webb was graduated from Hahnemann Medical College in Chicago in 1911. He had practiced at Larchwood, Lorenz and Audubon before locating in Fairfield, where he practiced for 23 years. In 1947 he moved to Bonaparte, retiring a few months later as a result of ill health. He was a former member of the Jefferson County and Iowa State Medical Societies.

Wedel, James R., 79, died November 9 at his home in Keokuk after an illness of one week. Born in Dover, Dr. Wedel was graduated from the Keokuk College of Physicians and Surgeons in 1897 and located in Vincennes, moving to Keokuk in 1910. He was a life member of the Lee County and Iowa State Medical Societies.

Werner, Carl A. Anderson, 77, of Albert City, died there November 7 after an illness of several weeks. Dr. Werner was graduated from the University of Nebraska Medical School in 1898. He was a member of the Buena Vista County and Iowa State Medical Societies.

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Tuesdays at 11:45 a.m.

WOI—Thursdays at 11:15 a.m.

Dec. 6-8 Christmas Seal Sale
Iowa Tuberculosis and Health
Association

Dec. 13-15 Modern Treatment of Tuberculosis
of the Lungs
Robert P. Hardwig, M.D.,
Waverly

Dec. 20-22 Bronchitis, Acute and Chronic
Roger Drown, M.D., Fort Dodge

Dec. 27-29 Brain Tumors
Carroll A. Brown, M.D., Sioux
City

ATTITUDE OF VD PATIENTS TOWARD CLINICS AND RAPID TREATMENT CENTERS

(Continued from page 575)

poraries, the age group with the highest syphilis incidence, everything possible should be done to insure their good will.

There was a good deal of evidence to indicate the importance of word-to-mouth advocacy of the diagnostic facilities. Thus it is seen that to propagandize offers another method of improving attitudes of the patients, as well as trying to overcome the shortcomings which may have contributed to the unfavorable opinions.

The fact that there were such large differences from clinic to clinic and among treatment centers indicates the possibility for improvement. While representative only of the areas participating in the study, these data may be of value in pointing out conditions which generally are objectionable to the patient. A suggestion box might be used by a particular clinic to provide information about patient's criticisms; although such a summary might not be representative, it would at least offer a basis upon which action could be directed in improving patient relations in clinics and rapid treatment centers.

COMMISSION SHOWS INCREASE OF BLUE CROSS ADMISSIONS DURING FIRST SIX MONTHS OF 1949

A release from the Blue Cross Commission on in- and out-patient cases paid, total days' care and average length of stay for the first six months of 1949 shows Blue Cross Plans paid for 1,944,765 cases involving bed care for their members during the six months period. These cases required a total of 14,794,541.4 days of care, each case using an average of 7.61 days.

For the first six months of 1948, Plans paid for 1,694,273 cases, 12.88 per cent less than this year. Days of care used during the first six months of 1948 were 12,430,317.85, 9.22 per cent less than this year. Patients were hospitalized an average of 7.93 days in 1948, .32 of a day longer than in the 1949 period.

Bed patient cases in 1949 occurred at the rate of 10,745 every day of the six months compared to a rate of 9,309 per day in 1948, a daily increase of 15.43 per cent. In addition to bed care the Plans paid for 225,071 visits to hospital emergency rooms during the first half of the year, compared to 151,869 such visits the first half of 1948, an increase of 48.20 per cent. Emergency room visits averaged 1,243 per day in 1949 compared to 834 per day in 1948, an increase of 49.04 per cent.

Hospital Service, Inc., of Iowa, with headquarters in Des Moines, reported:

	1st Six Months 1948	1st Six Months 1949
In-patient cases	30,302	33,338
In-patient days	216,737	227,676
Average length of stay.....	7.14 days	6.83 days
Out-patient cases	1,585	2,061



